

THE RAILWAY GAZETTE
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INCORPORATING
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TO CALLERS AND TELEPHONERS

Consequent on the war and the blackout regulations, as an emergency measure to assist our staff in getting home before it is fully dark, our office hours (without a lunch interval), commencing Monday, November 20, and continuing until Saturday, February 10, 1940, will be:—

Mondays to Fridays - 9 a.m. till 3.15 p.m.
Saturdays - 9 a.m. till 1 p.m.

Railway Wages

THE majority findings of the Railway Staff National Tribunal (summarised in our issue of October 27) have now been accepted by the N.U.R. and the A.S.L.E.F. The principal feature of the findings was the establishment of a minimum rate of pay for men in conciliation grades employed in the London area of 50s. a week, with rates of 48s. and 47s. for men in industrial and rural areas respectively. At the time of writing the railway companies have not published their opinion of the findings, which, of course, were based on considerations affecting their pre-war financial position and prospects. The total annual cost of the adoption of the majority findings has been stated as approximately a million pounds. Had war not supervened, the companies would have been free to decide the question of acceptance or rejection, but the coming of control by the Ministry of Transport makes an all-important difference in the situation. Meanwhile another factor has arisen, for the N.U.R. has now determined to put forward a claim for increased wages in compensa-

tion for the increased cost of living. No details of the amount or of the date upon which the claim will be preferred are yet available. Already the ascent of the "vicious spiral" has begun, coalminers, textile and other workers having received increases in October while prices are already well up the slope.

* * *

The Function of the Engineer

The proper function of the engineer, as prescribed in the Charter of the Institution of Civil Engineers, and quoted by Sir Clement Hindley in his presidential address just published, is the advancement of mechanical science and "the art of directing the great sources of power in nature for the use and convenience of man." It is a lamentable comment on our times that the air-raid shelter is today regarded as among the most useful and convenient things of life. The engineer has accepted this without even drawing public attention to the diversion of his great powers from their proper function to the destruction of man. The responsibility to do so, however, is not specifically his, for he forms but a section of the community which permits without protest in times of so-called peace the deliberate restriction of production that has been developing with increasing momentum since the last war, a restriction which cannot be justified on the grounds that the masses of the world's populations are already abundantly supplied with their material needs. How the muddle into which the world has allowed itself to drift is to be straightened out need not be discussed here, but the beginning of any successful operation must be at home. Only the fool has his eyes continually on the ends of the earth and there is at least some sign that people are beginning to notice what is going on under their noses.

* * *

Overseas Railway Traffics

In the 18th week of the current financial year there was a decided improvement in the traffics of the principal Argentine railways, but except in the case of the Buenos Ayres Great Southern this benefit was checked in the 19th week. The Great Southern has reduced its traffic decrease by 256,000 pesos in the two weeks. Central Uruguay receipts to date show an improvement of \$122,184 in currency but a decrease of £9,455 in sterling. A recovery of £15,922 in San Paulo traffics has been shown in the past two weeks.

	No. of Weekly Week Traffics	Inc. or Decrease	Aggregate Traffic	Inc. or Decrease
Buenos Ayres & Pacific*	19th	1,105 + 40	21,846 +	550
Buenos Ayres Great Southern*	19th	1,986 + 20	34,921 +	1,707
Buenos Ayres Western*	19th	625 - 56	12,486 +	877
Central Argentine*	19th	1,489 - 115	34,590 +	3,996
Canadian Pacific	44th	72,600 + 68,000	25,143,200 +	1,034,400
Bombay, Baroda & Central	29th	256,350 + 15,600	4,938,075 -	22,875
India				

* Traffic figures in thousands of pesos.

Canadian Pacific gross earnings for the first nine months of 1939 amounted to £21,089,000, an increase of £1,019,800, and the net earnings for the same period were £1,074,800 higher, at £2,541,000.

* * *

The Institution of Electrical Engineers

In these days of regimentation, the rapid organisation of 17,000 persons might be considered a commonplace achievement, but no idea of mushroom growth can be associated with our senior engineering institutions. The Institution of Electrical Engineers, founded in 1871, has every reason to be proud of a long history, leading up to its present paying membership of the order cited. A record, handsomely done and a worthy effort, has recently been produced dealing particularly with the period

1871-1931, which gives some interesting sidelights on the association of the institution with railway matters. Mr. Rollo Appleyard, O.B.E., M.I.E.E., the author, has had, very naturally, to deal with many other aspects of the institution's activities, but the original title of the association, The Society of Telegraph Engineers, at once suggests an obvious connection, which actually has never been broken. In 1873 there was a discussion on the block system of working railways and references to the contribution of electrical safety-devices towards railway safety. There was a transition period in which telegraphy and telephony gave way to more general electrotechnics before the rise of lighting and heavy power electrical engineering. All this and much more of absorbing interest to any student of engineering development has been dealt with by Mr. Appleyard in a way that is far removed from the dry-as-dust manner commonly associated with historical literature.

* * * *

Central Uruguay Railway

Receipts in currency for the year ended June 30, 1939, showed an increase of over 5 per cent., and expenditure an increase of 3 per cent., whereas expressed in sterling the improvement in receipts was only $\frac{1}{2}$ per cent., and there was a reduction of $1\frac{1}{2}$ per cent. in expenditure. The revenue increase in currency was distributed over all the main classes of traffic, with an advance of 3 per cent. in the tonnage handled.

	1937-38	1938-39
Passengers	4,972,441	5,465,734
Public goods, tons .. .	968,682	1,001,730
Average receipt per ton .. .	9s. 6-73d.	9s. 3-37d.
Train-kilometres .. .	3,899,974	4,224,646
Operating ratio, per cent. .. .	81.83	80.25
Passenger receipts .. .	223,108	226,423
Goods receipts .. .	463,090	464,852
Gross receipts .. .	975,871	980,666
Expenditure .. .	798,600	786,951
Net receipts .. .	177,271	193,715

From the operating surplus the sum of £136,970 has been appropriated to renewals. Extensive renewals of track are in hand.

* * * *

A Deferred Belgian Acceleration

Such was the success during the past summer of the streamline 60-min. service of the Belgian National Railways twice daily over the 71.0 miles between Brussels and Ostend, which by the inclusion of a Bruges stop made it necessary to run the 57.4 miles between Brussels and Bruges at a start-to-stop average of 74.8 m.p.h., that but for the war it was intended to keep one of the trains in service throughout the winter. Not only so, but it had been planned to introduce similar trains over the 61.7-mile route between Brussels and Liège, twice daily from each terminal at 8.30 a.m. and 5.30 p.m., taking 60 min. west-bound and 62 min. east-bound, as compared with 75 and 72 min. respectively of the present hourly *trains blocs* over this route. Despite the lower average speed required, the Brussels—Liège proposition would have entailed locomotive work at least as hard as the Brussels—Ostend 60-min. trains. A severe service slack is imposed over the swing-bridge and curve at Louvain; for the time being the trains between Brussels Nord and Schaerbeek run over temporary tracks at low speed while the new junction works are being carried out; the gradients of the line consists almost throughout of long stretches inclined at 1 in 200 to 300; but the worst obstacle of all is the celebrated Ans incline, which forms the approach to Liège (Guillemins), and which for 3 miles falls at 1 in 25.30 continuously.

A.R.P. Lighting

Workshop lighting presents many difficulties just now in view of the need for remaining invisible by night. During a demonstration given recently at the E.L.M.A. Lighting Service Bureau, Mr. N. I. B. Harrison emphasised the importance from efficiency and safety standpoints of maintaining a high standard of lighting in workshops, but warned his audience of the difficulties associated with the opening of doors and with the provision of proper ventilation. In places where conformity with regulations had been secured at the expense of lighting efficiency, production had fallen to a marked extent, in one case by as much as 50 per cent. The bureau had studied the difficulties and was in a position to demonstrate means for overcoming some of them. To permit the ingress or egress of a loaded truck or trolley a special light lock had been made, this being two sets of swing doors with a light-tight space between them of sufficient size to take the vehicle in question. Ordinary door exits could be provided like those of public lavatories with a wall built up in front of them and extending some way in either direction. An impervious roof was necessary over the space between the main wall and the light obstructing wall. Other traps could be seen at the bureau, and there was a device for permitting the ordinary sash type of window to admit air without exposing any light. Illuminated signs can be procured to provide guidance in the blackout, but at the bureau were shown indications and step treads done in a paint having fluorescent properties. When the dim light of an ultra-violet lamp fell on these their ghostly glow was clearly visible.

* * * *

Control of the Derwent Valley Light Railway

A Question (recorded at page 655) was asked in Parliament last week as to whether it was proposed to add the Derwent Valley Light Railway to those already taken under the control of the Ministry of Transport. Mr. S. J. Reading, the General Manager and Accountant, in a recent interview to the press, pointed out that three light railways in Kent and Shropshire were among the 11 included in the Ministry of Transport Order. It will be remembered that the Derwent Valley, although a light railway, is of standard gauge, has a physical connection with the L.N.E.R., and that locomotive power is provided by that company. It was explained by Mr. Reading that as a direct result of war conditions one of the main traffics had ceased, and that it would be a serious handicap to agriculture if the railway were to be closed. The Minister of Agriculture was being urged by the East Riding War Agricultural Committee to take up the question with the Minister of Transport. Mr. Reading was of the opinion that it would not be in the national interest to close the railway in wartime, as considerable road transport would be required to replace it, and it was one of the aims of the Government to conserve petrol supplies as much as possible.

* * * *

A Great Signal Equipment Designer

With the passing of Mr. Walter A. Pearce, whose death on November 6 last at the age of 76 we record with much regret in our personal columns this week, signal engineering loses one who played a prominent part in that story of development which has wrought such a change in ideas and methods since the end of last century, and who left a deep impression thereon. Brought into contact with the designers of some of the earliest really practical power-signal apparatus in the United States, where he spent some time in the early nineties, Mr. Pearce was later associated with the introduction of the electro-pneumatic system into

Great Britain, at Bishopsgate, Great Eastern Railway, where an American type of frame was installed during 1898, and subsequently directed the designing of the neat form of British E.P. power frame so widely used for many years, both in this country and abroad. He was also responsible for all the detail work necessary to produce the other items of the electro-pneumatic system as it was installed here, on the North Eastern, the District, the London tubes, and other railways, as well as much electric equipment which found wide favour, including the automatic and power signal apparatus adopted for the Berlin Elevated Railway. Of a very retiring disposition, Mr. Pearce mixed little in engineering assemblies, and his rare gifts were consequently not nearly so widely known as they deserved to be. Many of his designs are still firm favourites and their excellent performance, years after he produced them, is a lasting tribute to a judgment and a technical skill which commanded the admiration of all who were privileged to know him.

Accidents to Platelayers

Safety in track maintenance was one of the subjects discussed at the Roadmasters & Maintenance of Way Association annual convention in Chicago in September. Mr. R. H. Smith, Vice-President and General Manager of the Norfolk & Western Railroad, described how the number of accidents in maintenance of way work had been reduced, principally by building up safety moral and by attacking accidents at the roots of their causes. The casualty rate on the N. & W., which was 26.7 per million man-hours worked in 1924, had been steadily and consistently lowered until in 1938 it was 3.71, or 86 per cent. better than in 1924, and 54 per cent. better than the national rate of 8.11. Much depends on the attitude and interest of the foreman or ganger, and educational efforts were first concentrated on him. The handling of rails and sleepers used to cause more accidents than any other work, but better equipment and intelligent care have greatly reduced the number. Injuries from flying slivers of steel have been fewer since gangs were provided with better quality chisels and an emery grindstone to dress the heads against mushrooming. A patient and thorough analysis of every accident is an essential factor in a preventive system, with careful records comparing gangs and sections.

Locomotive Allocations

We are sometimes asked to explain what, in the view of correspondents, are rather mystifying circumstances where the allocation of locomotive power is concerned. Those who make daily journeys, often on main-line sections of a railway, note that relatively heavy trains are regularly worked by engines of lower power rating than lighter trains, to which are allotted more modern types of locomotive, having more adhesion and exerting a higher tractive force. The usual explanation is that the daily rostering of large numbers of locomotives involves *liere* and there, and as a matter of course, such "misfits," as they must appear to those not in possession of all the facts. This explanation does not always satisfy the enquirer, however, mainly because the same thing happens day after day and in connection with the same train workings on which time is regularly lost, apparently on locomotive account. In such circumstances, and where an amplitude of suitable engines is available, the use of older and less efficient types, especially on fairly tightly timed business trains, is not easy to understand, and those responsible for the design and construction of the engines may sometimes have to bear criticisms which should be levelled at the running department of the railway.

Compensation or Nationalisation?

THE continued delay in making public any information regarding financial proposals of His Majesty's Government consequent upon the control of the British main-line railway undertakings, to which we referred in our editorial note last week, is very naturally the cause of some concern alike to the railway directorates and to the stockholders, and various disquieting rumours are in circulation. It will be recalled that when the railways were taken over a quarter of a century ago under the provisions of the Regulation of the Forces Act, 1871, there was far less delay in announcing the Government's intentions. The Act of 1871 provided for full compensation to be paid to any company, possession of whose railway or plant had been taken, for any loss or injury sustained by the exercise of the Government's powers. Accordingly, in September, 1914, after negotiation between the Railway Executive Committee and the Board of Trade (which was then the responsible Government Department) an agreement was reached whereby compensation to be paid was fixed in general terms as the sum by which the aggregate net receipts of the railways for the period during which the Government was in possession should fall short of the aggregate net receipts for the corresponding period of 1913, subject to a proportionate reduction if the net receipts for the first half of 1914 were less than those for the first half of 1913. By a modification of this agreement in April, 1915, such reduction was no longer to be made, but instead the companies were to pay 35 per cent. of the war bonus granted under the Railway Conciliation Scheme. As the war of 1914-19 proceeded, and money was required by the companies to meet current commitments, a system of payment of compensation by monthly instalments, on the basis of provisional estimates, was introduced. Later it was agreed that the railway companies should be entitled to claim for the cost of arrears of maintenance, repair, and renewal work occasioned by the war, and an additional sum calculated to cover the ultimate cost of this work was thenceforward included in the monthly instalments. In November, 1916, a revised agreement was concluded between the railway companies and the Government which provided *inter alia* for the payment by the latter of interest at 4 per cent. per annum on capital expenditure, and for the replacement of stores and material used during the period of control, and also further defined the arrangements in regard to Government traffic.

On the present occasion, control of British railways by the Government was taken by the Minister of Transport under the Emergency Powers (Defence) Act of August 24, 1939; it became effective on September 1 (two days before war was declared), and is not limited in its duration. Twenty-five years ago the control under the Act of 1871 was of limited duration; this difference, among other things, doubtless lends colour to the suggestions of those who feel that the present control will result in nationalisation, as indeed has been suggested within the past few days in the daily press. These statements in the daily press are no doubt based on the assumption that differences of opinion may have arisen between the Ministry of Transport and the Treasury on the one hand and the main-line railway companies and the London Passenger Transport Board on the other, over the question of compensation. The matter, of course, is far from simple, for doubtless the special traffics carried during the war, if paid for by the Government on a commercial basis would result in a very justifiable increase in the prices of railway stocks; but at the same time encourage further demands for increased wages, thus accelerating the inflation spiral.

Since the British main-line railways came under the

control of the Railway Executive Committee, there have been no published weekly traffic returns, and consequently no official indications of traffic trends. At the time of the Minister of Transport's visit to Acton (see page 649) an increase was mentioned of wagon movement in one day from 5,075 a year ago to 5,303 now. The Minister himself stated on the same occasion that some 9,000,000 additional tons of coal traffics, or an extra 33½ per cent., had been handled in the first two months of war. Now the L.N.E.R. has given in the November issue of the *L.N.E.R. Magazine* a few interesting percentages. In the first fortnight of October, L.N.E.R. passenger business fell away by one-fourth, but the tonnage and receipts from merchandise originating on the system increased by about 20 per cent. Shipment coal diminished in volume, but this decline was offset by an increase in landsale traffic. On the whole, railway receipts of the L.N.E.R. from originating traffic are growing, but dock receipts are down by at least 25 per cent. and will be affected adversely by the tendency for overseas cargoes, to find their way to West Coast ports. The movement of traffic has not been interrupted to any serious extent by enemy action, despite air raids on the Tyne and the Firth of Forth.

Whatever be the outcome of the present negotiations, we feel strongly that the artificial conditions of wartime are particularly unsuited to the preparation and consideration of permanent legislation. Many persons regarded the grouping which succeeded railway control in the war of 1914-19 as the penultimate step towards nationalisation. Subsequent events, such as pooling of competitive traffics, and the establishment of the London Passenger Transport Board, have tended further in this direction. It is quite possible that nationalisation may be a result of the present wartime Government control of our railways, and for the moment we are not concerned with discussing the advisability of this course. There is no doubt, however, that permanent legislation of this importance and far-reaching consequence is deserving of the most careful consideration in times of peace, and we should deplore any effort—Government or otherwise—to take such a momentous step unadvisedly, lightly, or wantonly.

* * *

Buenos Ayres & Pacific Railway

RESULTS for the year ended June 30, 1939, were on the whole rather better than for the previous year. During the first four months of the year under review there was a decrease in revenue of over £200,000, but in November, 1938, an improvement set in, and aided by more than double the previous year's tonnage of fine cereals there was eventually an increase of £93,566, or 1·45 per cent., in gross receipts. This, accompanied by a reduction of £163,633, or 3·20 per cent., in working expenses, gave an improvement of £257,199 in net receipts. Exchange differences required £795,215, against £670,549, but the net profit improved from £682,784 to £815,317, and the total amount available for debenture interest, &c., was £947,248, against £826,217. Full interest payments on the due dates have been made on the first debenture stocks of the company, the Argentine Great Western, and the Villa Maria & Rufino Railways, and on the Pacific and the Great Western second debenture stocks making a total of £373,315. In addition, two payments each of one half-year's interest on account of arrears were made on July 28, 1938, and June 9, 1939, on Pacific 4½ per cent. consolidated debenture stock and on Great Western 5 per cent. debenture stock, so that payment of arrears on these stocks has been brought up to January 1, 1935, and April 1, 1935, respectively. The total debit balance is now £6,531,985.

Some comparative operating figures are given in the following table:—

	1937-38	1938-39
Passengers	14,262,602	14,335,765
Tons of goods (metric) ..	3,032,137	3,306,789
Train-miles	9,344,227	9,600,937
Net profit per train-mile ..	2s. 10½d.	3s. 4½d.
Operating ratio, per cent. ..	79·08	75·46
Passenger receipts	£877,506	865,859
Goods receipts	4,478,415	4,609,435
Gross receipts	6,469,595	6,563,161
Working expenses	5,116,262	4,952,629
Net receipts	1,353,333	1,610,532

The average length of line worked during the year under review was 2,801 miles, a reduction of 5 miles compared with the previous year. Passenger numbers increased by 73,163, or 0·51 per cent., but passenger receipts decreased £11,647, or 1·33 per cent. Expansion of traffic on the Buenos Aires local section continued to respond to the lower fares and improved train service, but on some main-line sections road competition became more intense, and traffic in the maize zones suffered from the poor harvest. On the goods side the principal increase was in wheat, which was up 138·25 per cent. in tonnage and £353,721 (166·06 per cent.) in receipts. There was also a satisfactory improvement from £1,706,851 to £1,752,280 in the receipts from wine traffic. Receipts from this traffic were the best, with the exception of the year 1936-37, since the record years of 1928-29 and 1929-30, in spite of rail competition in Cuzo and road competition over nearly the whole of the main line.

The sum of £250,000 has been set aside by the board for the year as a further provision for deferred renewals, and this amount has been included in the working expenses of the year. In the previous year the sum so included was £100,000. Notwithstanding this much larger provision for renewals and the heavier traffic movement, the reduction in working expenses was substantial, assisted by the additional relief, roughly £65,000, provided by retentions in salaries and wages, effected in accordance with the Presidential Award of 1934, during six months of the year against three during 1937-38.

Some British Railway Figures

The numbers of locomotives, carriages, and wagons, owned by the four British main-line railways at December 31, 1938, were as follow:

	G.W.R.	L.N.E.R.	L.M.S.R.	S.R.	Total
Steam locomotives	3,630	6,518	7,613	1,816	19,577
Diesel locomotives	1	—	31	3	35
Rail motor vehicles—					
Steam	—	80	5	1	86
Electric	—	109	268	1,511	1,888
Diesel	18	4	6	—	28
Passenger carriages	5,985	12,461	17,478	6,651	42,575
Brake vans, &c.	2,730	7,358	6,342	1,794	18,224
Wagons (railway-owned)	80,142	253,566	279,994	32,777	646,479

The following figures give the total engine mileage for the year ended December 31, 1938:—

G.W.R.	L.N.E.R.	L.M.S.R.	S.R.	Total
98,489,788	171,935,211	228,333,168	84,249,027	583,007,194

Coal and oil purchases of the four main-line companies during the year ended December 31, 1938, were:—

	G.W.R.	L.N.E.R.	L.M.S.R.	S.R.	Total
Coal—tons	2,429,000	4,642,562	6,513,126	1,138,987	14,723,675
Lubricating oil—gallons ..	865,000	2,789,493	2,478,732	840,000	6,973,225
Petrol and diesel oil for fuel—gallons	7,200,000	3,774,161	5,789,447	14,405,800	31,169,408

Letter to the Editor

(The Editor is not responsible for the opinions of correspondents)

Emergency Services and the "Square Deal"

Elmwood, Welwyn Garden City

November 9

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—May I be allowed an inch or two of your space to say how fully I endorse everything Mr. Dyckhoff says about the emergency train services and to emphasise one point which he has overlooked? Not only are the present services meagre, slow, and uncomfortable, but they are unpunctual.

The 7.48 a.m. train from Welwyn Garden City, upon which I, in common with many others, rely to get me to my office, has never once been punctual in its arrival at Finsbury Park during the two months it has been running. Frequently it has been as much as 20 min. late even on clear mornings. In the evening the same is true of business trains in the reverse direction, and my experience is that the suburban

service between Paddington and Hayes on the Great Western is equally bad. This unreliability is by far the greatest of the disabilities which the regular passenger has to suffer. It should be easy to remedy.

May I also be allowed to comment on your editorial note to Mr. Dyckhoff's letter? Railway services may yet be disorganised by air raids, but this disorganisation may only be local and will then occur whether the services are adequate or inadequate. Would it not be better, therefore, that adequate services should be continued during periods of quiescence, which in sum are likely to be longer than those of disturbance?

Yours faithfully,

F. H. MASTERS

[If Hitler's war involves us in no more serious disabilities than those complained of by our correspondents (to say nothing of the greatly reduced postal facilities, daily newspapers half their usual size but costing as much, the black-out, increased taxation, four new Ministries, 50 emergency Acts of Parliament, and 40 "controls"), we shall have much to be thankful for.—ED., R.G.]

PUBLICATIONS RECEIVED

The History of the Institution of Electrical Engineers, 1871 to 1931.

By Rollo Appleyard. Published by the Institution, London: Savoy Place, Victoria Embankment, W.C.2. 10 in. × 7 in. × 1½ in., 342 pp. + coloured frontispiece and 37 plates.—This handsome volume has been published in full art canvas binding in a limited edition, and the price to the public is 18s. 6d. a copy, which price only slightly exceeds the cost of production. Members of the Institution may have one copy at 7s. 6d., and additional copies at 12s. 6d. We refer to this history in an editorial note at page 629.

Preliminary Abstract of Railway Statistics (Steam Railways, Express Companies, and the Pullman Company) for the year ended December 31, 1938. Washington, U.S.A.: Bureau of Statistics, Interstate Commerce Commission. 17 in. × 11 in. 59 pp. Paper covers. Price 40 cents net.—This pre-

liminary abstract of the statistics of the railways of the U.S.A. is published by the Interstate Commerce Commission in order to make available at as early a date as possible certain totals not otherwise easily obtainable, as well as the advance summaries relating to the whole of the railway system. The totals are, however, subject to changes after correction in the annual reports have been authorised. The final figures will duly appear in the Statistics for Railways for 1938, to be published by the Interstate Commerce Commission at a later date. The advance figures now given are compiled from the annual reports of the larger steam railways, express companies, and the Pullman Company.

Tabulating Technics.—The attenuated September issue of *The Tabulator* shows that the British Tabulating Machine Co. Ltd. is carrying on at Letchworth with commendable energy. The

compilation of the multitude of statistics which are a feature of Government activities, from paying farmers not to produce potatoes to assuring that the correct number of rum rations go up to the front line, can be done with greater efficiency if a means such as the Hollerith punched card accounting system is used.

Machining of Copper and its Alloys.

—This well-produced book, bound in cloth covers, discusses comprehensively the machining properties of copper and copper alloys, and summarises modern machining practice as applied to these materials. Copies may be obtained free of charge on application to the Copper Development Association, Thames House, London, S.W.1.

Terminal Boxes.—Particulars as to the cable sizes, dimensions, and general construction of terminal boxes for insulated and uninsulated three-core cables are given in leaflets P.F. 349-350 just issued by British Insulated Cables Limited, of Prescott, Lancashire.

THE SCRAP HEAP

While a blacked-out express was running from Liverpool to London a thief crept into a darkened compartment and stole a suitcase containing jewels worth nearly £700 belonging to Mrs. Napier, wife of Major W. E. S. Napier, of Peebles. She had gone to the restaurant car for dinner. The case was found open in another part of the train.

33,000,000,000 to 1

A grain handling story of a "believe it or not" variety occurred recently at Dauphin, Manitoba, where a heavy grain crop was being shipped from the district. And the odds against the incident were 33 million millions to one! Four Canadian National Railways grain cars were loaded at Dauphin and hauled to elevators on the Great Lakes. Within ten days the same four cars were back under the spouts of the Dauphin elevator for a second load of grain. A Canadian National statistical expert, knowing

that the company has over 66,000 grain cars, worked out the odds.

A French engine driver named Durckel has been recommended for the Military Medal for dragging a wounded French officer from a blazing plane while German planes fired on him. Durckel was driving his train on September 25 when he came upon the last stage of an aerial battle. A French machine fell in flames not far from the train, whereupon Durckel brought the engine to a standstill, raced to the burning plane, and rescued the officer.

During the past few weeks nearly three million workers have received wage increases in the region of 10 per cent. The beneficiaries include 700,000 miners, 500,000 cotton and textile workers, 120,000 dock workers, and lesser numbers in many other industries. These rises have been chiefly based on a rise in the cost of living which has amounted

to about 10 per cent. During the great war, 1914-18, the cost of living rose about 100 per cent. . . . A policy of handing out wage increases right, left, and centre without regard to the dangers of slipping into a spiral in which wages chase prices and by so doing raise prices and so on *ad infinitum* is a policy (if such an expedient merits the use of the word policy) which, if persisted in, will sooner or later cause an immense amount of suffering to the wage earners of this country.—From "K-H News-Letter."

"There would be no Hitler today if the German people were not susceptible to crude and brutal leadership of the type he represents. There would be no Hitler today if there had not been in every German street and village a number of men ready and willing to inflict upon their own compatriots the awful cruelties and tyrannies which mark his regime."—Sir Edward Grigg (*Parliamentary Secretary to the Ministry of Information*) in a speech at Altrincham.

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

NEW SOUTH WALES

New and Old Hawkesbury River Bridges

The existing Hawkesbury River railway bridge, which, as previously mentioned in *THE RAILWAY GAZETTE*, is to be replaced, consists of seven 416-ft. pin-jointed truss spans, each girder having a depth at the centre of 58 ft. The caissons had to be sunk very deep and with the piers measure 141 ft., 195 ft., 186 ft., 187 ft., 188 ft., and 202 ft.; it was claimed that this was the deepest group of foundations of any bridge in the world when it was built just 50 years ago. Increased train and locomotive weights necessitated the strengthening of the girders some 10 years ago, but further signs of weakness and fatigue, and the failure of the roller expansion bearings to function efficiently, added to cracks appearing in the caissons, have now finally combined to cause the structure to be condemned.

Preliminary Work for the New Bridge

Preliminary work has already begun upon the new bridge, which will be just upstream of the old one, and trial borings are in hand. The river bed has been found to include a 100-ft.-thick layer of compact sand encountered 150 ft. below water level, and below this again is rock. It is probable that six slightly longer spans than those in the existing bridge will be used for the new structure. There is to be a separate road bridge located about 1½ miles farther upstream, to replace the existing diesel-driven ferry boats.

ARGENTINA

Track Renewals on State Lines

Plans involving the expenditure of up to 10,000,000 pesos for track renewals on the State lines have been submitted to Congress through the Ministry of Public Works. The message accompanying the project states that the proposed renewal works, which cover the lines between Buenos Aires and Rosario, Serrezuela and San Juan, and Añatuya—Quimili—Tintana, are urgent, more particularly on the first-mentioned section, which, although in good condition at present, requires renewing, in view of the heavy demands now made upon the track by the new fast diesel trains and the general increase in traffic.

Wage-cuts Returned by the Compañía General

With the authority of the Ministry of Public Works, the Compañía General de Ferrocarriles de la Provincia de Buenos Aires has arranged to return to its staff sums amounting in

the aggregate to \$124,960, made in respect of salary and wage deductions during 1938-39, in accordance with the terms of the Presidential Award of 1934. The sum mentioned represents approximately 59 per cent. of the total deductions.

Grain and Linseed Sowings Estimate

The first estimate of the area sown with grain and linseed, issued on September 15 by the Ministry of Agriculture, gives a total for the entire republic of 13,700,000 hectares (34,250,000 acres), which is 258,000 hectares (645,000 acres) less than last year, due principally to the decline in wheat sowings. The following are the figures of the four principal crops:—

	Hectares	(Acres)
Wheat ..	7,500,000	18,750,000
Linseed ..	3,000,000	7,500,000
Oats ..	1,400,000	3,500,000
Barley ..	880,000	2,200,000

In comparison with last year's figures, the area sown with wheat shows a decrease of 945,000 hectares (2,362,500 acres) or 11.2 per cent. Linseed, on the other hand, shows an increase over last year of 326,000 hectares (815,000 acres), or 12.2 per cent.; oats are higher by 40,000 hectares (100,000 acres), or 2.9 per cent.; and the figures relating to barley are 49,000 hectares (122,500 acres), or 5.9 per cent. above those of last year.

BOLIVIA

Construction of International Branch Railway

According to information from La Paz, dated September 7, the Bolivian and Brazilian Governments have agreed upon the construction of an international branch line between Quijarro and Puerto Sucre. The scheme will be financed out of the funds authorised by the treaties concluded on February 25, 1938, between the two countries, which provide for the construction of an international railway from Corumbá (Brazil) to Santa Cruz de la Sierra (Bolivia), as mentioned in *THE RAILWAY GAZETTE* of May 27, 1938.

INDIA

Carriage and Wagon Standards

At a meeting held in 1937-38, the Carriage and Wagon Standards Committee considered the extent to which railways might be permitted to depart from existing standards, and decided that, in view of the latitude in layout permitted under the Railway Board's orders, standard body construction drawings would only be required for parts unaffected by variations in layout. The future policy of carriage part

drawings was examined and recommendations were made regarding their retention or otherwise. Recommendations relating to the design of light-weight coaching stock were also made, and it was decided that the question should be investigated by the Central Standards Office.

Indian-built Welded Wagons

As a result of the recommendations of the Carriage and Wagon Standards Committee of the Indian Railway Conference Association, orders were placed in India for twelve covered "CR" type wagons of welded construction. Six of the wagons are to be all-welded, and six of part-welded construction, the underframes being riveted and the bodies, including roofs, sides, ends, and floors, welded. The Central Standards Office scrutinised the designs, details of which were developed by the two contracting firms on lines indicated by the Central Standards Office. The main object is a reduction of tare weight coupled with increased strength.

Scrutiny of Patent Specifications

One of the duties of the Central Standards Office is to examine carefully particulars of applications for patents as published in *The Gazette of India*. Copies of patent specifications likely to be of interest to Indian railways are obtained, indexed, and recorded for future reference. Opposition proceedings are undertaken in cases when this is considered necessary to protect the interests of the Government of India and Indian railways. In 1937-38, four such cases arose, of which one was successfully concluded and the rest remained pending.

The Modern Holiday Exodus from Calcutta

In connection with the annual *Puja* holiday exodus from Calcutta, it is noteworthy that, with the exception of the duplicate Darjeeling mail trains, all other special trains run on the Eastern Bengal Railway provided only intermediate and third class accommodation. At Howrah, the Divisional Superintendent, East Indian Railway, requisitioned the services of over a hundred boy scouts to assist the railway staff in dealing with the rush. The volunteers rendered valuable help to passengers in maintaining order at the booking offices and in keeping clear access to the platforms. Additional first-aid arrangements were made, and water trolleys were provided to carry drinking water to the platforms. Bookings were heaviest on October 16 and 18.

Economies Before the Wedgwood Report

It is not generally known that even before the Wedgwood Committee made its recommendations, the Indian railways had been steadily pursuing a policy of rationalisation. Between 1926-27 and 1937-38, the cost of main-

tenance and supply of locomotive power per 1,000 gross ton-miles came down from Rs. 1-186 to Rs. 0-887 on the broad gauge, and from Rs. 1-60 to Rs. 1-283 on the metre gauge lines. The cost of maintenance and operation of carriage and wagon stock per 1,000 gross ton-miles had also dropped from Rs. 0-851 to Rs. 0-614 on the broad gauge, and from Rs. 0-938 to Rs. 0-662 on metre gauge systems.

Surcharge on Coal

Though the outbreak of the war has not brought about any general increase in the freight rates on Indian railways, it is notified by the East Indian and the Bengal-Nagpur Railways that, with effect from November 1, the usual surcharge of 12½ per cent. on the total freight will be levied on all bookings of coal, coke, and patent fuel from the collieries on these two railways to Bombay and stations in the vicinity of Bombay. At present this traffic is exempt from the coal surcharge, possibly in order to promote traffic by rail in preference to the sea route via the Kidderpore Docks (Calcutta). The increase in sea freights attended with the not-too-ready availability of freight has made it unnecessary for the railways to differentiate between Bombay and other destinations in respect of charges for the transport of coal. Traffic in soft coke unsuitable for metallurgical purposes will continue to enjoy exemption from the surcharge.

Railway Finances

On September 4, the Central Legislative Assembly passed a resolution extending until April 1, 1942, the moratorium in respect of the arrears of payment of the contribution from the Railway Department to the general revenues, and also in respect of the loans taken from the Depreciation Reserve Fund of the Indian State Railways to meet deficits in railway working. The Finance Member explained in detail the present position in regard to railway finance and the implications of the Niemeyer Award. The resolution ensures the continuation of the existing arrangements, under which any railway surplus will first be appropriated to the payment of the subvention under the Niemeyer settlement before any refund is made to the Depreciation Fund or general railway reserves against debts. The Finance Member further assured the House that before the moratorium expired the existing convention for the separation of railway finance from the general finance would be carefully examined with a view to the adoption of a suitable system for the future.

Purchase of Railway Stores

According to the Railway Administration Report for 1937-38, the value of stores imported direct by the State-managed railways in India decreased from Rs. 103-23 lakhs in 1931-32 to Rs. 0-37 lakhs in 1937-38. The reduction is, however, partly due to the

separation of Burma and the consequent omission of figures relating to the purchases of the Burma Railways in the statistics for 1937-38. The percentage of the value of indigenous stores to the total value of stores purchased by State-managed railways increased from 58-11 per cent. in 1931-32 to 68-91 per cent. in 1937-38. The value of stores purchased through the Indian Stores Department also increased steadily, the total purchases for all railways amounting to Rs. 408-50 lakhs in 1937-38.

Echo of Majdia Accident

Driver Pearson and Guard Namey, who were in charge of the ill-fated Dacca mail involved in the Majdia disaster in April last, on the E.B.R., were sentenced to terms of imprisonment by the Sub-Divisional Magistrate at Chuadanga. On appeal in the court of the District and Sessions Judge, the appellants were released on bail.

SOUTH AFRICA

Tourist Traffic

The annual report of the Johannesburg Publicity Association, just issued, states that, with the exception of exports of gold and diamonds, tourist traffic is now third in order of monetary importance in the industrial fabric of the Union. Wool headed the list with an average value of £10,667,323, fruit—dried and preserved—was second with £3,193,206, and the tourist traffic third with £2,561,000 during 1938. The increase in the visitors' traffic from outside the Union has grown steadily from 6,808 in 1932 to 39,992 in 1938. The report states that in relation to its working costs, tourist publicity yields the highest dividend of all the Union's enterprises.

Hostel System

The hostel system, referred to in THE RAILWAY GAZETTE of October 12, 1938, has been further extended. There are now ten hostels situated at Congella, Pietermaritzburg, Ladysmith, Pretoria, Langlaagte, Germiston, Bloemfontein, Capetown, Port Elizabeth, and East London, providing accommodation for 1,440 lads. In addition, there are three communal messes catering for 80 youths. The average charge for board, lodging, and laundry at all hostels is approximately £2 15s. per inmate per month.

Rail Charges on Diverted Cargoes

The Pretoria Chamber of Commerce has made representations to the administration to the effect that cargo landed at Capetown from certain ships instead of other ports to which it was consigned, should be railed at the rate equivalent to that which would have been charged had it been landed at the ports to which it had been consigned. In its reply the administration has stated that as it is in no way responsible for the diversion of shipping, it cannot see how it could justify accepting responsibility for the

extra cost incurred, and, moreover, it would be contrary to the letter and spirit of the Railways and Harbours Regulation, Control and Management Act of 1916, to apply a lower rate for conveying certain merchandise on the ships from Capetown to inland centres than the rate chargeable for merchandise of the same description which would, in the ordinary way, be railed from Capetown to inland centres; neither is it possible to differentiate in the charges as applying to the handling services performed at harbours in connection with the cargoes.

CANADA

Coaches for Trinidad

After keen competition with British and other firms, the Canadian Car & Foundry Company recently secured an order for 12 passenger coaches for the Trinidad Government Railways, and these cars are expected to be shipped from Montreal to Port of Spain in the next few days. This is the first order Canada has had from the West Indian railways for coaches. The 12 cars are at the firm's Turcot shops, awaiting the arrival of the English electric fittings that were specified as part of the equipment. These are expected to arrive immediately, and their fitting will take only three or four days, when the cars will be shipped on a Norwegian vessel, specially built to handle complete railway cars.

Painted a deep maroon colour, with black lines, eight are third class coaches, and four composite first and third class cars. Owing to the high temperature in Trinidad, there is only a wooden screen or louver—which will keep out the sun or rain—but no glass in the windows of the third class coaches. They are built on the style of a streamlined Canadian coach.

SWITZERLAND

Federal Railways 1940 Budget

In the Budget for 1940, which was considered at a recent meeting of the Federal Railways Administrative Board, strict curtailment of expenditure is again the keynote. In spite of the war and its indirect effects on Switzerland, works under way are to be completed and the more urgent new works undertaken; the construction budget shows fr. 25,000,000 for such items and the necessary renewals of rolling-stock. Electrification of the metre-gauge Brunig line (Lucerne-Interlaken) is to be proceeded with, and an order has been placed with Brown, Boveri & Co., Baden, and the Swiss Locomotive & Machine Works, Winterthur, for 16 motor-vans for mixed adhesion and rack working on this line. New works include doubling between Auvornier and Boudry, on the Neuchâtel-Yverdon section. Receipts for 1940 are estimated at fr. 325,000,000, and working expenses at fr. 231,456,000, also the profit and loss account shows a fr. 26,650,000 deficit.

ROAD TRANSPORT SECTION

This section appears at four-weekly intervals

The Epic of the China-Burma Road

THAT the construction of the new Chinese motor road from the Yangtse valley to Kunming and onwards to the Burma frontier is one of the great road-building feats of the world in all ages is evident from the lecture given by Mr. F. Burton Leach, late Chief Secretary to the Government of Burma, to the East Indian Association and the Royal Central Asian Society on November 1. He said that last December the American Ambassador to China had motored the whole distance from Chungking to Rangoon, a matter of 2,000 miles in 13 days, covering an average distance of 150 miles a day. This, said Mr. Leach, was clear proof of the suitability of the road for motor traffic. The most difficult part of the work of construction was the last 350 miles from Hsiakwan, near Tali-fu, to the Burmese frontier. No one who knew anything of that tangled mass of precipitous mountains, cleft by gigantic torrents and the upper waters of mighty rivers, could fail to be amazed at the engineering feat which had been accomplished, almost without mechanical appliances, by human labour working against time, when the country was in the throes of a disastrous war. It could have been accomplished only by the people who built the Great Wall of China.

London Transport Acquisitions

FOR some long time past nearly all the regular motor-bus services working in the monopoly area of the London Passenger Transport Board have been in the hands of the board, but for convenience a few operations on the edge of that area have remained in private hands. The most notable example of this is the business of the West Kent Motor Services Limited, working in the neighbourhood of Sevenoaks. In September, 1933, London Transport refused the application of this company to continue its services of stage carriages in the board's Special Area, but subsequently granted such consent upon condition that the board should have the option to purchase within five years from October 1, 1933, the undertaking of the company consisting of seven services of stage carriages, two of which are entirely within the board's area and five partly within the board's area, together with eight single-deck buses. London Transport has now exercised this option and the purchase was completed on September 30 of the present year for £5,200. By agreement with the Maidstone & District Motor Services Limited (an associate of the Southern Railway), the services outside the board's area were transferred to that company in consideration of an equitable proportion of the purchase price. West Kent Motor Services Limited was placed into voluntary liquidation on October 26. The recently-issued report and accounts of the London Passenger Transport Board also record that the board has acquired the undertaking of H. Aston (known as the Berkhamstead & District Motor Services) consisting of a service of stage carriages between Northchurch, Hemel Hempstead, and Apsley, wholly within the board's area. The Berkhamstead business also included the maintenance of certain excursions and tours, together with four single-deck buses, all of which were transferred for a total consideration of £4,000. In this

recently-issued report, which covers the year ended June 30, 1939, it is also recorded that during the year under review, consent has been granted to the operation of 198 new road services, of which 180 were operated on one day only. The board also issued consents to continue the operation of 194 services for a further period, the original consents having been limited to the currency of the road services licences to which they related. Permission to vary services for which consent had already been issued by the board under Sections 16 and 17 of the Act of 1933 was given in respect of a further 41 services. Excluding the 180 one-day services, the consents issued by the board during the six years of its operation which still remained effective at June 30, 1939, provided for the working of 1,200 services by 237 operators, as compared with 1,232 services provided by 235 operators at June 30, 1938. The consents issued in connection with 215 of these services are subject to review by the board upon expiry of the current road service licences.

The Producer-Gas Conspiracy

OVER a year ago, the Transport Producer-Gas Makers' Association urged upon the Government the importance of further and more positive action as a defence measure, and suggested that the Government should have available a reserve of plants for immediate application on the outbreak of a war. The Coal Utilisation Council has been anything but inactive in furthering the use of anthracite-burning producer-gas vehicles, and more than 18 months ago the Low-Temperature Coal Distillers' Association approached the Minister of Transport with a view to the overhaul of the road regulations and taxation to bring producer-gas vehicles into line with steam and electric vehicles. The request of the association was refused, but these three organisations alone had made the Government fully aware of the position. Since the outbreak of war, the attitude of the Government towards producer-gas and alternative-fuel vehicles has been most unsatisfactory, and long discussions inside and outside the House of Commons elicited nothing but equivocal and mysterious replies from Government spokesmen. The reason came out about ten days ago, when the Ministry of Mines staged a demonstration (see page 641) of a producer-gas plant on a trailer, the design of which had been evolved by a Government committee, comprising members from the Department of Scientific and Industrial Research, the Ministry of Transport, the Ministry of Mines, and certain large road operating companies. There was not one representative of the producer-gas plant manufacturers, but the committee does not claim any particular originality for its design. By holding its hand on taxation and road-regulation amendment until its own producer design was ready, the Government has forced the producer-gas plant manufacturers, who, for the last two or three years have borne the cost of research and experiment, into a most invidious position, and by the intention, now, of making the new design available without charge to potential manufacturers, has given the makers of proprietary plants little prospect of the business to which their work has entitled them, unless the Government design should prove a white elephant. Not without significance is it that until after the

outbreak of war the manufacture of these proprietary plants was mainly in the hands of comparatively small firms which had been unable to embark upon a bold policy involving heavy capital outlay, and, by the same token, had been prevented from bringing to bear upon the Government the only type of pressure to which Governments nowadays seem to yield—financial. The new Government producer-gas plant and the method of handling it is just one further example of rationalisation, which is akin to nationalisation, and simply has the effect of crushing private enterprise.

A Pressure-Charged Lorry

AMONG the commercial road vehicles now being tried out with pressure-charged diesel engines is a 6-ton lorry operated by the Adolph Saurer A.G., and used to carry engineering supplies, castings, and the like between the owner's works at Arbon and various Swiss towns. It is fitted with a Saurer BLD engine with the usual dual-turbulence cylinder heads, and which normally gives 100 b.h.p. at 1,800 r.p.m. It is equipped with a Büchi exhaust-gas turbo pressure-charger which is set to give a maximum output of 140 b.h.p. at the same rotational speed. The top engine speed corresponds to a road speed of about 35 m.p.h. On a recent trip with this lorry loaded to about $4\frac{1}{2}$ tons, it accelerated up a grade of about 1 in 35 from 12 to 19 m.p.h. in 5 sec., from 19 to 25 m.p.h. in $5\frac{1}{2}$ sec., from 25 to 31 m.p.h. in 5 sec., and from 31 to 35 m.p.h. in 6 sec. The exhaust was visible. On a flatter grade, of 1 in 75 to 1 in 85 with curves, the lorry accelerated from 12 to 19 m.p.h. in 3 sec., from 19 to 25 m.p.h. in $3\frac{1}{2}$ sec., from 25 to 31 m.p.h. in 5 sec., and from 31 to 35 m.p.h. in $3\frac{1}{2}$ sec., and here the exhaust was invisible after about 20 m.p.h. When converting the lorry to use the pressure-charged engine, the only change required was a slight cut away in the side of the bonnet.

Buenos Aires Transport

THE gross receipts of the tramway and subway undertakings operating in the City of Buenos Aires in the year 1938 compared with those of 1937 as follow:—

	1937	1938
	(pesos paper)	
Anglo-Argentine—		
Tramways	28,582,800	29,781,900
Subway	4,103,700	4,092,900
Lacroze—		
Tramways	3,285,100	3,804,700
Subway	3,176,500	3,858,000
Southern Electric Tramways	316,509	283,700
Port and City of Buenos Aires (tramways and buses)	480,100	482,000
C.H.A.D.O.P.Y.F. subway	1,869,000	2,428,800

The 1938 figures for the Lacroze tramways are provisional and cover certain suburban services not previously included. The total number of passengers carried by the above companies rose from 466 to 492 millions. The total passenger movement by all means of transport, including buses and *colectivos*, was estimated at 1,200 millions in 1938; the effective rolling stock amounted to 2,600 tramway cars (operating over some 560 miles of track), 304 subway cars, 1,300 buses, and 2,500 "microbuses." The foregoing figures are quoted in the Report on Economic and Commercial Conditions in the Argentine Republic, issued by the Department of Overseas Trade (H.M. Stationery Office, 3s. 6d. net). They are of academic interest only since the services of all the tramway and subway companies, and those of the largest bus companies, were taken over by the Transport Corporation of the City of Buenos Aires on February 16, 1939. The constitution of the corporation was described in the Road Transport Section

of THE RAILWAY GAZETTE of April 7, 1939, at page 581. The corporation has power to expropriate those bus and "microbus" companies which did not signify their desire for inclusion. It is expected that the corporation will be able in time to eliminate much wasteful overlapping.

Level Crossing Warning Signals in Denmark

THE Danish State Railways and certain private lines in Denmark have some 900 automatic level-crossing warning signal installations in service, adopted as the result of experiments made with 10 trial equipments put into service in the years 1931 to 1934. The signals are of the colour-light type and normally dark, showing a flashing red light to the road traffic and a flashing white light along the railway when a train approaches within a certain distance of the crossing. Should the driver of a train see no light as he nears the signal location, he is required to slow down and whistle; if the white flashing indication is visible, normal running may be maintained. At certain particularly dangerous crossings a single stroke gong or bell is provided, striking in unison with the light flashes. Audible signals are, however, undesirable in residential areas and have consequently found little favour in most countries. Such bells must also be specially constructed to be perfectly reliable in such exposed conditions of weather. Where warning signals are located near stations and the stopping and starting of trains render purely automatic control unsatisfactory, arrangements are made to enable the station staff to prevent an unnecessary warning being given, or ensure that it shall with certainty be given when, say, a shunting movement is finished and a train is proceeding on its way. This supplementary manual signal control is similar in principle to that we referred to in our Road Transport Section of February 10, page 222, when describing a crossing warning installation at Strathroy, Ontario, on the Canadian National lines.

Enamelled Steel Tile Lining for Sub-aqueous Road Tunnel

THE Detroit (U.S.A.)—Windsor (Canada) highway tunnel beneath the Detroit River is of rectangular cross section, and its walls are lined with porcelain-enamelled steel tiles, each 12 in. × 6 in., slightly dished convexly, and with their edges turned back $\frac{3}{8}$ in. to $\frac{1}{8}$ in., at rather more than 90 deg. with the face. After nine years in position this tiling was inspected and reported to be in good order; there was no corrosion, except where mechanical abuse had exposed the steel to moisture, and no deterioration directly due to the type of material. The tunnel consists of two cut-and-cover-built approach inclines practically in the dry, two shield-tunnelled sections, and a central section 248 ft. long sunk in place below the river bed and subsequently concrete covered by grouting. Leaks have occurred at various joints, and there is a small amount of seepage, with the result that large areas of the concrete are soaked and the metal of the lining and reinforcement is exposed to moisture. Consequently, some of the tiles have been forced out by frost from time to time and have had to be replaced, the average number replaced annually being some 400, or about 0.2 per cent. The report recommends that furring strips be used between the concrete and the tiling to allow of drainage space behind the latter. Had this been done in the first place there would have been no necessity for replacements due to frost, and a perfect surface could have been obtained and retained. The report expresses the view that this type of enamel tiling, if properly installed by competent craftsmen, is eminently suitable for all requirements of sub-aqueous highway tunnels.

Road Transport and the War—3*

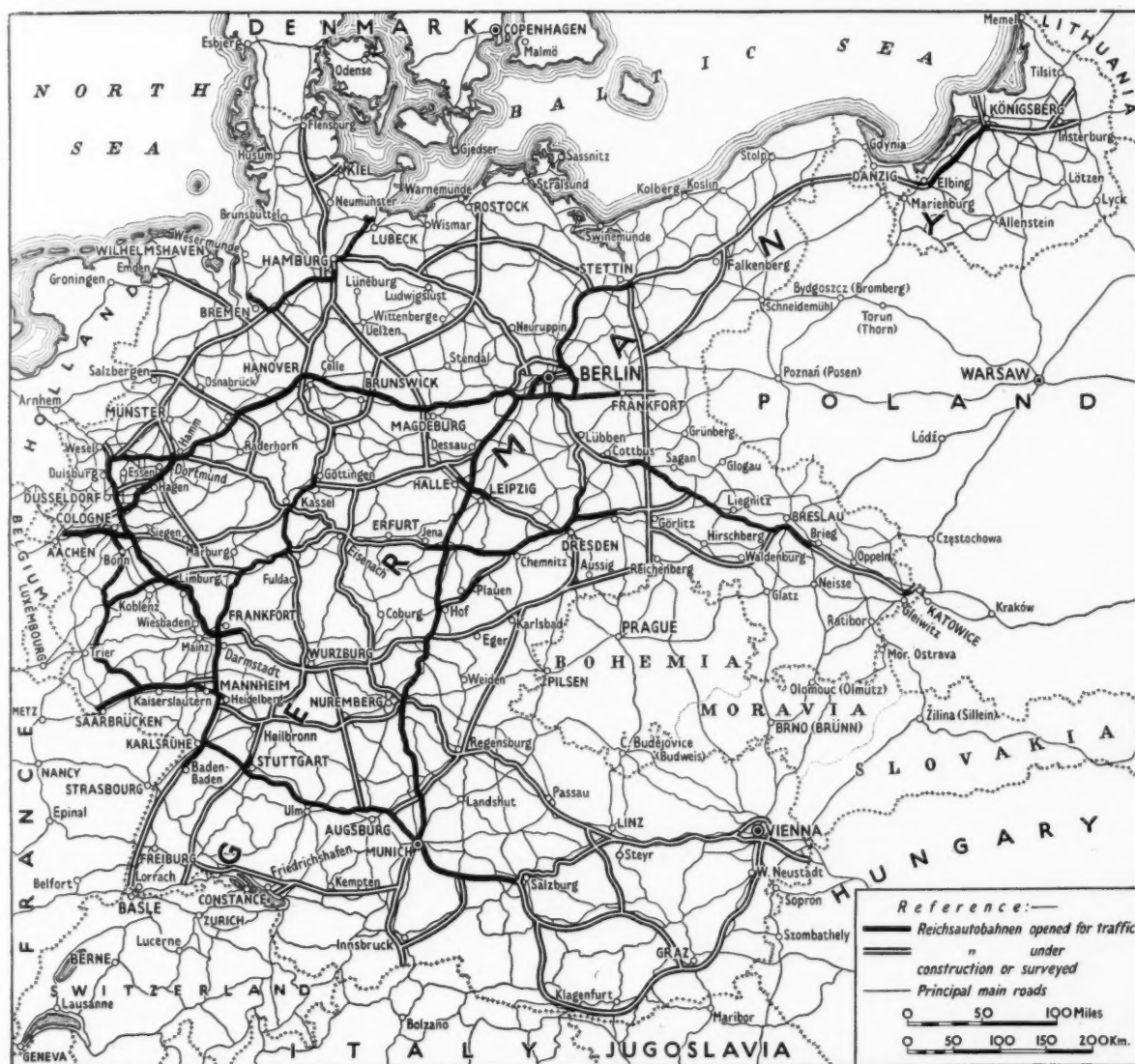
The position of the German motor roads—Street and vehicle lighting—Fuel

ONE of the points in the German conduct of the war on the Western Front upon which some military strategists have commented with surprise, is the slight use so far made of road transport and the famous *Reichsautobahnen*. This has been interpreted in various ways, such as an indication of the inadequacy of these motor roads; a hint of acute petrol shortage; and evidence of the mechanical inefficiency of the German motor vehicle. We make no claim to special knowledge of German military strategy, but we do not believe there is justification for any of these assumptions. On the contrary, we are of opinion that Germany possesses in her system of motor roads a valuable military asset, but that prudence in conserving supplies which are not readily replaceable is the primary reason for reserving road transport for a lightning stroke.

A French military theorist recently set out to demonstrate

that the *Reichsautobahnen* were comparatively useless, and assembled figures in such a way as to purport to show that the motor road scheme had gone to pieces. He suggested that additions to the original scheme had diffused efforts, and that lack of purpose to complete the roads was indicated by the great variations in the numbers of men employed from time to time. For example, he said that "on May 1, 1939, on various pretexts the project was increased by yet another 300 miles, yet the number employed on the work, which had at one time reached the total of 118,000, and in 1938 was 83,363, was then only 53,370." Such deductions come within the category of what British official circles term wishful thinking, and it is foolish to underestimate the strength of an enemy. In the early days of the *Reichsautobahn* scheme, one of the main considerations of the authorities was to use the services of the greatest numbers of unemployed, and accordingly work was begun at many scattered points. This absorbed mainly unskilled or semi-

* The first article in this series was published in our issue of September 22, page 401; the second on October 20, page 515



The approximate state of the German motor roads at the outbreak of war

skilled labour engaged in large numbers on formation work such as excavating and banking. As the scheme progressed, the roads required more skilled attention for important civil engineering tasks such as bridge construction and the final surfacing for which mathematical precision was demanded. Coincidentally, the unemployment situation improved (through both rearmament and civil progress), and with fewer unskilled workers, together with more skilled workers and labour-saving plant, progress on the motor roads would appear to have been steady.

A glance at the map we reproduce, which indicates the approximate position of the motor roads at the outbreak of war, reveals the extent of the existing network, of which 1,048 additional kilometres (650 miles) were opened during 1938, bringing the total to 3,063 km. (1,903 miles); at the beginning of the present year 1,450 km. (900 miles) were under construction. Germany possesses a relatively small fleet of commercial motor vehicles, but the system of *Reichsautobahnen* will doubtless enable this to be employed to advantage. On the other hand, it should not be forgotten that ordinary roads in Germany are inferior to those in either our own country or France, in width, surface, and alignment.

Last year Germany imported nearly two-thirds (64 per cent.) of her supplies of mineral oil (petrol, crude oil, and so forth), and more than three-quarters (about 78 per cent.) of these imports came from neutral overseas countries now inaccessible in view of the operations of the British Navy. Approximately 22 per cent. of these imports came from neutral sources that are still accessible. Undoubtedly considerable stocks have been accumulated, but estimates as to the extent of these are necessarily based on little or no reliable information. At the beginning of October, Hitler ordered a further reduction in speed limits so as to economise fuel. The new limits are 40 km. (25 m.) p.h. in towns; and outside towns and on motor roads 80 km. (50 m.) p.h. for cars, and 60 km. (37½ m.) p.h. for lorries and buses. All Germany's supplies of natural rubber are imported, and, of course, from distant places; some 48 per cent. were from neutral points now inaccessible, and about 52 per cent. from countries now at war with Germany. In 1938 about one-eighth of the country's rubber needs was produced synthetically at home, and it was hoped to double the output during the present year. This synthetic rubber, known as *Buna*, was demonstrated at the Düsseldorf Exhibition of 1937 to be more durable than natural rubber, but it is more costly and also uses materials for which other war demands exist. It will be recalled that in the war of 1914-19, when far less use was made of the road motor, Germany was so short of rubber that many cars and lorries were shod with iron or steel bands with coil springs interposed between them and the rims proper.

Street and Vehicle Lighting

The approach of winter, with longer hours of darkness, has intensified the need and desire for improved lighting both in vehicles and on the roads, and during the past month considerable progress has been made. The blackout period has been shortened by half-an-hour at each end, and the Minister of Home Security, on November 3, announced the forthwith modification so that the blackout now begins half-an-hour after sunset (*i.e.*, at lighting-up time for vehicles) instead of at sunset, and ends at half-an-hour before sunrise, instead of at sunrise. This change was made after consultation with the Air Ministry in the light of representations made to the Minister of Home Security by representatives of the British Employers' Confederation and the Trades Union Congress. Apart from shortening the duration of blackness, efforts are being made to devise a type of modified street lighting of low intensity which would not be visible by raiding aircraft, and could be left alight even while a raid was in progress. In only a few towns in this country can all street lighting be extinguished from a central control. In most towns street lamps are lighted and extinguished individually, either by a time-clock control or by hand. Moreover, more than half the street lighting is by gas. In London, for example, it would be impossible to switch off gas-lighting in the streets without at the same time switching off gas for all purposes.

On October 23 the London Passenger Transport Board

announced that improvements are being made in the system of lighting on trams during the blackout period. The difficulty up to the present has been that, unlike the trolleybuses which are equipped with a low-voltage lighting system in the same manner as the buses, the trams take the power for their lighting direct from the track at 600 volts. In order to reduce the lighting to the approved standard, resistances were inserted. The authorities having agreed to a relaxation of the previous standard of lighting, modifications are being carried out to these resistances to give an increased voltage for the lamps and the blue lamps inside the lamp cowls are being replaced by white lamps. This will allow a white light of similar intensity to that on the buses and trolleybuses to be directed on to the tram seats. An improved type of head lamp mask is being fitted. Arrangements are being made also for a red light to be shown at the rear of all London trams. As trams are driven from both ends, this is being done by fixing slides which will show either red or white as required in the lamps at each end.

Instructions permitting the use of flares in streets and of additional lighting on motor vehicles during thick fog, whether in blackout hours or otherwise, were issued by the Ministry of Home Security at the beginning of November and circulated to police authorities throughout England, Wales, and Scotland.

When a Chief Officer of Police is of opinion that conditions are sufficiently bad to render the provision of flares absolutely essential for the guidance of traffic, he may authorise their use by a local authority or other responsible organisation which normally provides fog flares on the highway. Arrangements must be made for a man to be in attendance to extinguish the flares immediately on receipt of an air raid warning. As regards motor vehicles under fog conditions, an unscreened fog lamp may be used on a motor vehicle provided that:—

(a) the lamp is additional to the ordinary headlamp, is operated by a separate switch, and fitted below the level of the headlamp;

(b) that the beam of light is directed downwards and towards the near-side;

(c) its use is restricted solely to occasions when the fog is so thick that progress is impracticable without it; and

(d) that, as is compulsory for ordinary headlamps, the fog lamp is extinguished immediately on an air raid warning.

Compensation for Commandeered Vehicles

A new office set up by the War Office shortly after the outbreak of war is dealing with claims for compensation for vehicles which have been impressed for Army transport by owners who are dissatisfied with the figure assessed by the Impressment Officer. The branch is the Appeals Adjustment Office of the Chief Inspector of Supplementary Transport. It may be pointed out that while the owner of an impressed vehicle has the right to have the price fixed by a County Court Judge, it is equally open to him to settle the matter by agreement and where this can be done it is more expeditious.

Fuel

The second petrol rationing period will begin on November 23, and will continue until January 31, 1940. From the opening of business on November 14 an increase in the price of pool motor spirit by 1½d. a gallon was introduced by the Petroleum Board. Price to the public thus became 1s. 9½d.—the highest for 15 years. The latest increase is the second since the war began. In accordance with the Government wish, the first increase was deferred until October 17, when the retail price of pool spirit was raised from 1s. 6d. to 1s. 8d. The total rise was left to be accomplished in two stages, with a four-week interval between them. Several factors (other than Government taxation) tend to determine the level of petrol prices in Great Britain. In the first place, the greater part of this country's supplies are drawn from the Gulf of Mexico. The U.S. Gulf export price has increased appreciably (in dollars) since the war began. The second factor is the rate of exchange between the dollar and the £ sterling; the exchange value of the latter has been lower since the war. Then ocean freight rates have risen considerably since the outbreak of war, and a new element of increased costs, namely, war risks insurance, has been introduced. Moreover, transport and distribution costs in the United Kingdom have tended to increase, and protective work has been necessary at main storage points. The cost of coastwise shipment is approximately double the pre-war level.

Producer-Gas for Commercial Vehicles

An account of the taxation and Road Traffic Act regulations, together with descriptions of the plants available and the results obtained in this country

By BRIAN REED

SOME years ago the development of the high-speed road transport oil engine was delayed in Britain by the knowledge that sooner or later the fuel would be taxed to something like the equivalent of petrol, and thus largely reduce the saving in fuel costs. Similarly, the development of producer-gas vehicles within the last two or three years has been retarded because manufacturers and potential users desired some Government guarantees of assistance by reduced taxation or modified regulations, which would supplement existing fuel economy in offsetting the operating inferiority compared with petrol and diesel vehicles. The *raison d'être* of the gas vehicle has always been simply the use of home-produced fuel.

Government Decisions

Since the beginning of the war the attitude of the Government towards producer-gas vehicles has been nebulous in the extreme, but within the past ten days the situation has been clarified (a) by a demonstration in London on November 8 of producer-gas lorries and buses, including a number equipped with a plant evolved by a committee set up by the Government, and (b) through statements made in the House of Commons by Mr. Geoffrey Lloyd, the Secretary for Mines, that the present Government had no intention of taxing home-produced coal, coke, or gas within the next five years, and that there was no intention of rationing these alternative fuels for services of national importance. Further, as the weight of the producer-gas equipment frequently brings a rebuilt vehicle into the next higher taxation, and lower speed, class, the Government has decided to make concessions on this point, and the Ministry of Transport and the Treasury are busy with details.

Although several types of producer-gas plants have been operating successfully for two or three years in British road vehicles, the committee set up by the Government to investigate the question, under the chairmanship of Sir Harold Hartley, undertook the design of a producer of its own, which, it is claimed, is specially suitable for conversions, and which can be built of ordinary materials by ordinary labour. This design is to be made available without charge to firms able and willing to manufacture it. The committee believed that the best method of conversion would be to carry the plant on a trailer, although the producer itself is suitable for either chassis or trailer mounting.

The carriage of a gas plant on a trailer is no new idea; it was mooted at least 20 years ago, and its convenience in the rapid conversion of a considerable number of vehicles to gas or producer-gas propulsion has always been recognised. Only road regulations have prevented its use hitherto.

Trailer Regulations

This use of trailers for a plant sponsored by the Government helps to remove some of the doubt as to the legality of trailers, although since the end of October the position in this respect has been cleared up by the Public Service Vehicles (Drawing of Gas-Producer Trailers) Order, 1939, by which public service vehicles are allowed to draw a trailer for the carriage of gas containers supplying, or plant and material producing, gas for the propul-

sion of the engine of the drawing vehicle. This applies to producer-gas and cylinder-gas equipment. There is still some doubt as to the legality of such trailers if used in conjunction with six- or eight-wheel lorries of maximum overall length, as hitherto it has been illegal to haul trailers of any description behind such vehicles. But it is understood that the Ministry of Transport will give consideration to applications for exemption from this regulation for the purposes of experiment.

Commercial Vehicle Tests

Although even now the number of producer-gas vehicles at work on British roads must be well under 100, contrasted with more than 10,000 in France and at least a couple of thousand in Italy, several interesting service trials have been made by railways and railway-associated companies during the last year or two. For example, the Great Western Railway uses two Latil anthracite-burning tractors, as illustrated and described at page 405 of THE RAILWAY GAZETTE for September 22 last.

During the last few months the Eastern Counties Omnibus Co. Ltd. has been running an anthracite-burning single-deck bus in the Norwich area, the seating capacity of which vehicle has been reduced from 36 to 30 by the installation of the producer plant. A similar type of bus is being operated by the Western National Omnibus Co. Ltd., and another by the North Western Road Car Co. Ltd. in the Marple district, near Stockport. In this last example the back row of seats of a 31-seat bus has been taken out and the rear of the vehicle converted into an asbestos-lined compartment housing a producer of French origin. This bus is being tried deliberately on a hilly route, where the maximum loss of 30 to 35 per cent. in output at top engine revs. compared with a petrol engine of equal piston-swept volume, might be expected to show up any weak points in the new equipment.

One double-deck and three single-deck buses in the Bristol area are running experimentally with producer-gas, and in two of them the apparatus is arranged like that in the bus of the North Western Road Car Co. Ltd. One of the single-deckers operated by the Bristol Tramways & Carriage Co. Ltd. between Bath and Bristol is equipped with one of the Government producer plants carried on a two-wheel trailer. East Midland Motor Services Limited has converted one of its single-deck buses working on the Chesterfield local services, and here again the producer is carried on the back of the chassis. Anthracite has been used, but trials are being made with a smokeless fuel from the Bolsover plant of the Derbyshire Coalite Co. Ltd. The producer capacity of 6 cwt. of fuel is enough for a mileage of 250 or thereabouts. Another railway-associated operator, the Scottish Motor Traction Co. Ltd., is to make an experimental application of a gas-producer plant to a passenger bus, and an order for the equipment was placed some weeks ago.

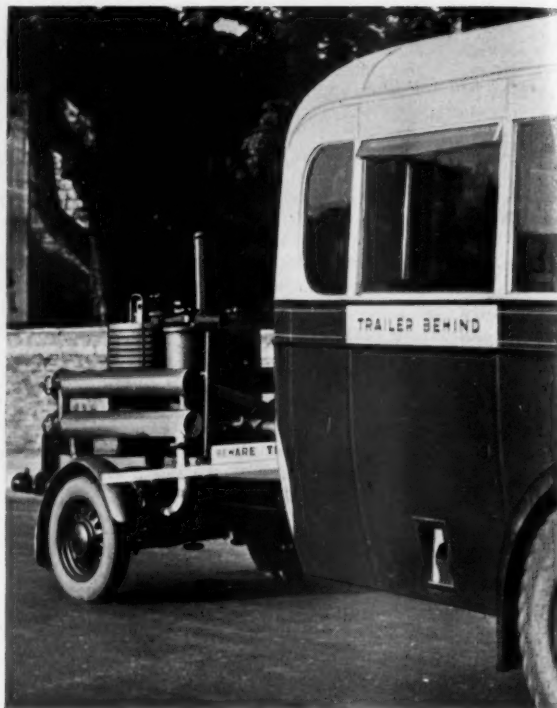
Activities on the L.P.T.B.

By arrangement, another experimental application of the Government design of trailer-fitted producer-gas plant is to a double-deck bus of the L.P.T.B. operating between Kingston and Epsom. London Transport is associated with a further series of tests, with a double-deck ST



Above: Government design of gas producer mounted on trailer behind an L.P.T.B. double-decker

Right: The same design of gas producer attached to a single-decker of the Bristol Tramways & Carriage Co. Ltd.



Bellay gas producer mounted on rear of chassis of an A.E.C. Regent bus owned by the London Passenger Transport Board, a unit in the Country Services (green) fleet

Regent bus equipped with a Bellay producer, as used by the A.E.C. This particular plant is carried on a platform bolted to the rear of the chassis, and is enclosed by a wire net surround. Vehicles with plants mounted in this fashion do not comply with existing regulations concerning overall length; however, the Ministry of Transport, on application, is prepared to waive these regulations to permit of experiments being undertaken.

The use of trailers is likely to occasion some difficulties when reversing or cornering, as well as from the movement of other traffic. On the other hand, some operators do not believe in bringing a producer-gas bus into a depot housing petrol-engined vehicles or petrol tanks, and hitherto have stabled the complete bus outside. A trailer can be uncoupled easily and kept outside, what time the bus itself is held under cover.

Ministry of Mines Demonstration

After an address by Mr. Geoffrey Lloyd at the Ministry of Mines on November 8, numbers of producer-gas vehicles were on show in the yard of the London Fire Brigade headquarters. Most of these, including the L.P.T.B. bus and several Bedford lorries, were equipped with Government plants carried on single-axle trailers. Others on view were three lorries of the Gas Light & Coke Company, one a Thornycroft with a Dupuy plant which has been running for two years, and two Dennis vehicles with equipment evolved by G.L. & C.; a lorry belonging to Macnamara fitted with an H.S.G. plant; a tractor belonging to Pickfords with a double-unit Gouhin-Poulenc producer, which has been at work for 15 months; the L.P.T.B. bus with the Bellay plant and A.E.C. engine; and a light Bedford truck with Gouhin-Poulenc equipment.

Unladen, the trailer and plant sponsored by the Government weigh 8 to 10 cwt. and carry 3 cwt. of fuel, enough to propel an ordinary vehicle for 125 to 150 miles. Low-volatile anthracite and certain types of low-temperature coke have been specified for use in this producer. Research directed to widening the range of fuels is being carried on at the Fuel Research station.

(To be continued)

Overseas Notes

Abandonment of Local French Railway Services

Two French local railway services, those between Saint Gaudens and Aspet in the Haute Garonne Department, and those running from Lyons towards the south-western suburbs, have been abandoned by Decree of the Government. In each case an arrangement had been made between the railway and the local authorities, whereby the railway services are replaced by bus services operated by the railways administration. The Decree explains that these services have been running at a loss, which has been made good by local subsidy; replacement by buses is expected to render this

of this important bridge has been completed within the short period of 104 days.

Road Activities in India

The Standing Committee for Roads, which recently met at Simla under the Chairmanship of Sir Andrew Clow, Member of Council for Railways & Communications, approved a number of additions to the road programmes of Bombay, Madras, the Punjab, Assam, Sind, and certain administered areas. The committee also agreed to the grant of a subsidy of Rs. 4,000 per annum to the Indian Roads Congress. The grant of



Left: International level crossing sign at the approach to the intersection of road and railway in Poland. Right: Sign used by Polish Ministry of Communications to indicate to road users that the road ahead is being repaired or is blocked. The plan exhibited shows the alternative routes, and the descriptive board above gives the various explanations necessary in connection with the deviations

unnecessary. The Saint Gaudens and Aspet line is being replaced by two buses and a goods vehicle; and the other lines by 15 buses capable of carrying about 8 cwt. of goods in addition to passengers. The buses work over similar routes to those of the railways they replace. It is pointed out that these abandonments have been hastened by the war, and it is considered most likely that further abandonments of unprofitable local railway lines in various parts of the country may be expected. The French Government is known to be preparing a new rail and road co-ordination scheme, and it is believed that this will tend to reserve to the railways most long-distance traffic, and leave short-distance traffic to road transport undertakings.

Spanish Road Bridge Reopened

The new road bridge over the river Ebro at Amposta was inaugurated with ceremony by the Minister of Public Works on October 4. The new bridge, which is of the suspension type, replaces one which was destroyed by the retreating Republican army during the civil war. It is the longest bridge in Spain, the single span measuring 134 m. (440 ft.). The roadway is 9.84 m. (32 ft. 4 in.) in width, a considerable increase on the width of the old bridge. The Amposta bridge is the key crossing of the Ebro delta, near Tortosa, on the main road between Tarragona and Valencia. The construction

Rs. 64,000 for the continuation of soil research in relation to roads at the Punjab Irrigation Research Institute was, moreover, approved.

Super-Long-Distance Goods Traffic by Road in India

Evidence recently given by a road operator before the Indian Rates Advisory Committee casts a lurid light on the extension of road competition with railway goods traffic. The witness stated that he ran lorries between Calcutta and Peshawar—a distance of perhaps 1,500 miles and parallel to main lines of railway throughout—touching at important cities *en route*. On the outward journey, he carried miscellaneous commodities which were highly rated on the railways; on the return trip dry fruits, cotton and miscellaneous goods were carried.

Road Transport and the South Indian Railway

The South Indian Railway Administration has made arrangements with a road transport agency to run from October 1 bus services between Ambasamudram station and Lower and Upper Dam sites and Vikramasingapuram. Third class railway tickets from Ambasamudram to local stations will be available at the bus stations. The system of street delivery of parcels has been introduced in Madura, the second largest city in the Madras Presidency.

Level Crossing Elimination in South Africa

Notable station reconstruction on the Witwatersrand

THE extraordinary growth and development of road traffic in South Africa within recent years, particularly on the Witwatersrand, has greatly accentuated the dangers which beset road users, including those who require to cross railway lines, and the question of eliminating, protecting, and improving level crossings has been thoroughly investigated by the railway administration. In the case of busy crossings entire elimination is aimed at in preference to the provision of additional protective measures such as flashlights, and with this end in view an

extensive programme of works was drawn up. In the Witwatersrand area 28 crossings have been replaced by either under- or overbridges, and the work of eliminating an additional 59 crossings is progressing.

In some cases it was necessary to lower the line to permit of the building of roadways over the railway, and the work was carried out under conditions of great difficulty, particularly in regard to the crossings near Jeppe station and at Mayfair station through which a rapidly expanding suburban passenger service had to be maintained concurrently with the lowering

work and electrification of the line. We illustrate progressive stages of the work at Jeppe and Mayfair where new stations, with the rails at a lower level and with overhead station buildings and road bridges have been built. Mayfair is situated about two miles to the west of Johannesburg, just beyond Braamfontein, and Jeppe is one and a half miles to the east of Johannesburg station. Over the whole distance, and, indeed, all the way from Langlaagte through Johannesburg to Germiston, there are four running tracks. Electrification is on the 3,000-volt d.c. system with overhead current collection, and both passenger and freight trains are worked electrically; the yearly current consumption is about 100,000,000 kWh.

The electrically-hauled freight trains pass through Jeppe, as this type of haulage is in force between Pretoria and Braamfontein. There are also about 30 multiple-unit trains a day in each direction, and steam freight and passenger trains.



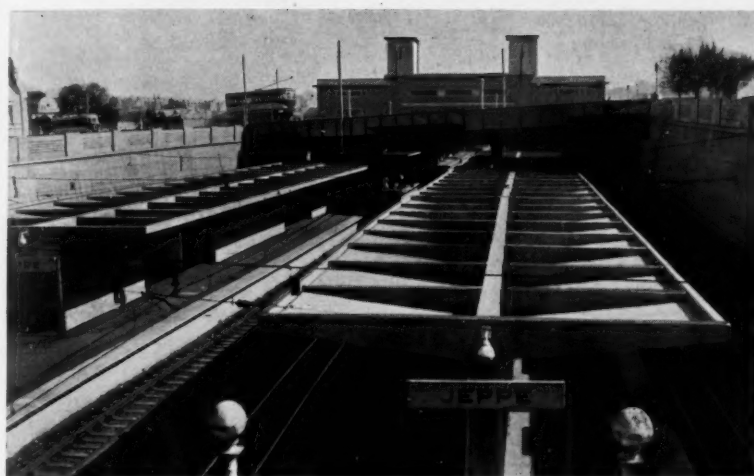
Electric train in new station at Mayfair, S.A.R. The railway was formerly at ground level, involving an awkward level crossing



New station buildings on overbridge at Mayfair, S.A.R.



Above : New station building and road overbridges at Jeppe, with (in foreground) new road on site of old station



Left : Platforms with reinforced concrete umbrella roofing at Jeppe new station

Below : The old station at Jeppe immediately after trains had been transferred to the new station on the right, and the trams diverted to the new overbridge, necessitating their cutting across the site of the old station



NEW STATION AT JEPPE, SOUTH AFRICAN RAILWAYS



The decentralisation of the Southern Railway headquarter staff has necessitated establishing an organisation known as the Emergency Road Communications. It was planned in peacetime, and began work on September 2. The despatch riders (seen above) and car drivers average 10,000 miles a week, and deliver some 2,500 despatches daily



Captain Euan Wallace, Minister of Transport, inspecting the handling of goods under blackout conditions during his visit to Paddington goods depot, G.W.R. (see page 649)



On November 9 the G.W.R. completed the installation of automatic train control throughout the 2,852 miles of its main-line system. The last ramp being fitted at Penzance

RAILWAY NEWS SECTION

PERSONAL

MR. VINCENT L. DEAN

Mr. V. L. Dean, V.D., Divisional Superintendent, North Western Railway of India, has been granted four months' leave as from October 4, and has now arrived in this country. Mr. Dean, as recorded in our issues of September 22 and October 6, was recently appointed General Manager, Ceylon Government Railway, and was due to take up that appointment in January, 1940, but we now learn that he has been offered, and has accepted, the more important post of General Secretary, Indian Railway Conference Association, which includes the duties of



Mr. P. G. B. Reyneke

Appointed Manager of the Publicity & Travel Department, South African Railways & Harbours, with headquarters at Johannesburg

Director, Indian Railways Broad Gauge Wagon Pool (covering 45,000 route miles and the inter-railways distribution arrangements of 125,000 wagons). Mr. Dean has now decided to accept this latter appointment instead of that of General Manager, Ceylon Government Railway.

Mr. P. G. B. Reyneke, who has been Director of the Publicity & Travel Department, London, of the South African Railways & Harbours for the past four years, as from November 1 has been appointed Manager of the Publicity & Travel Department of the South African Railways & Harbours, with headquarters at Johannesburg. Mr. Reyneke was born at Malmesbury, Cape Province, South Africa, and educated in the Transvaal. He first entered the railway service in 1903 at Johannesburg and was stationed at headquarters in various capacities until he came to London in 1924 to act as Information

Officer at the Empire Exhibition at Wembley, where later a travel office was opened. At the conclusion of the Exhibition this office, with Mr. Reyneke was, transferred to South Africa House and led to the inauguration of tourist bureaux in the Union and to the organising in 1928 of tourist and travel publicity as a separate department of the South African Railways & Harbours Administration. In 1929 he returned to South Africa and became in succession Publicity and Travel Agent at Durban and Capetown. Four years later he came to London again and took up the appointment as Director of the Publicity and Travel Department.

G.W.R. STAFF APPOINTMENTS ENGINEER'S DEPARTMENT

Mr. R. F. Wilson, Divisional Engineer, Newport, has been appointed to act as Divisional Engineer, Wolverhampton, on the retirement of Mr. H. S. B. Whitley at the end of this year.

Mr. T. C. B. Davies, Divisional Engineer, Gloucester, will act as Divisional Engineer, Newport.

Mr. M. G. R. Smith, Assistant Divisional Engineer, Cardiff, has been appointed Assistant Divisional Engineer, Paddington.

Mr. R. H. Edwards, Assistant Divisional Docks Engineer, Barry Docks, has been appointed Assistant Divisional Engineer, Cardiff.

Mr. H. G. Lakeman, Assistant in Charge at Cardiff Docks, has been appointed Assistant Divisional Docks Engineer, Cardiff, Newport, Barry, and Penarth Docks.

CHIEF MECHANICAL ENGINEER'S DEPARTMENT

Mr. E. H. Robinson, Chief Carriage and Wagon Inspector, has been appointed Assistant to the Locomotive Running Superintendent for Carriages and Wagons, Swindon.

Mr. H. Colton has been appointed Assistant to the Carriage and Wagon Works Manager, Swindon.

Mr. T. R. Hall, has been appointed Assistant to the Divisional Locomotive Superintendent, Newton Abbot.

Mr. T. Hornbuckle, Chief Technical Assistant to the Chief Mechanical Engineer, L.M.S.R., has retired after 36 years of railway service. Mr. Hornbuckle began his engineering career in 1897 at Hornsby's Grantham works and was later with Professor William Robinson at Nottingham University. In 1903 he joined the Electrical Department of the Midland Railway, and in 1911 was transferred to the Derby Works Manager's office, holding a number of inspecting and executive positions until 1928, when he became Chief Technical Assistant in the Carriage and Wagon Department of the L.M.S.R. In 1931, Mr. Hornbuckle was appointed Chief Technical Assistant to the C.M.E.,

and in that position was responsible, among other things, for the early diesel locomotive development on the L.M.S.R.

Mr. C. W. Harrison, who has been appointed Director of Publicity & Travel, South Africa House, London, was born in 1893 in South Africa and educated in Durban and Pretoria. He joined the South African Railways & Harbours service at the latter centre in 1910, and trained in various capacities at outside depots in the Transvaal and Cape Province, eventually qualifying and acting as a fully-fledged station-master. In 1913 he was attached to the Divisional Superintendent's office at



Mr. C. W. Harrison

Appointed Director of Publicity & Travel, South Africa House, London

Port Elizabeth, transferring a few years later to the Assistant General Manager's office at Johannesburg, subsequently being posted in turn to several staff investigation committees, including 8-hour day committee, Rhodesia Union Confederation Commission, &c. From 1923 he served for a period of fourteen years on the General Manager's Parliamentary staff, during which he was associated in a clerical capacity with the many forward developments which have characterised the policy of the South African Railways and Harbours Administration within the past two decades, such as electrification, new lines construction, harbour improvement schemes, &c. In 1936 he was appointed as first assistant to the Director of Publicity & Travel at South Africa House, succeeding to the principal position on November 1, 1939. In the course of both duty and leisure Mr. Harrison has travelled extensively in South and East Africa, the British Isles and on the Continent.

Sir Alfred J. Law, Chairman of the Rochdale Canal Company, left estate valued at £448,802 gross (£393,772 net).

INDIAN RAILWAY STAFF CHANGES

Mr. H. Hinton Cooper has been appointed to officiate as Chief Mechanical Engineer, N.W.R., in place of Mr. L. Flatt, whose services, as announced in our issue of October 6, have been lent to the Indian Stores Department.

Mr. W. Mills has succeeded Mr. Hinton Cooper as Superintendent of Mechanical Workshops, N.W.R.

Mr. L. Wilson, General Manager, G.I.P.R., has been granted an extension of leave on medical certificate until December 2.

A tablet in memory of the late Sir Charles Batho, Alderman of Aldgate, and Lord Mayor in 1927, was unveiled in the Church of St. Andrew Undershaft on Wednesday. Sir Charles Batho was a Director of the London & North Eastern Railway Company from 1928 up to his death in 1938.

Mr. W. McAuley Gracie, M.B.E., Assistant Goods Manager, Southern Area, L.N.E.R., is the new Master of the Worshipful Company of Carmen. Mr. Gracie was admitted a Liveryman of the Worshipful Company on January 15, 1929, was elected to the Court of Assistants on March 4, 1935, and was elected Senior Warden on July 11, 1938. The present Lord Mayor (Sir William Coxen) is a Member of the

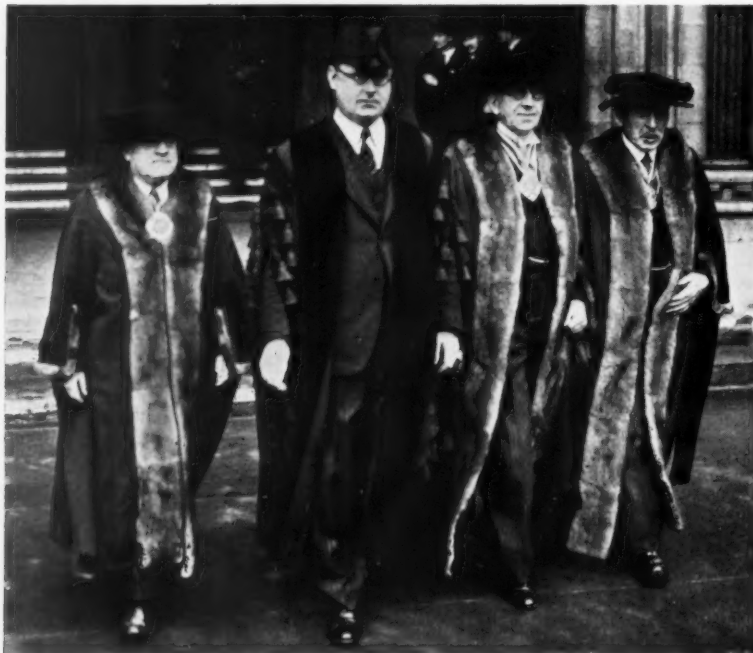


Dr. Temple, the Archbishop of York, as President of the York Council for Wartime Service, opening a canteen at York station on November 1, for the benefit of Servicemen. The group includes Mr. C. M. Jenkin Jones, Divisional General Manager, N.E. Area, L.N.E.R.

Court of Assistants of the Worshipful Company of Carmen. The photograph we reproduce shows the robed deputation which accompanied the new Lord Mayor on his visit to the Law Courts on November 9, for the purpose of making his statutory declaration before the Lord Chief Justice and receiving intimation of the Royal Approval of his election.

The deputation consisted of the Master (Mr. W. McAuley Gracie) supported by the Senior Warden (Colonel E. W. Crawford, C.B.E., D.S.O.), and the Junior Warden (Mr. W. A. G. Mitson) and was attended by the Clerk and the Beadle.

We regret to record the death, on November 6, of Mr. Walter Allan Pearce. Mr. Pearce, who was born on May 31, 1863, was associated in the early 'eighties with the late Mr. W. R. Sykes. He joined the staff of the Westinghouse Brake Company in 1889, and from 1893 to 1895 studied in America the design and development of signal apparatus with the Union Switch & Signal Company. On his return to England in 1895 he became associated with the earliest power signalling apparatus in this country, one of which was the 2½-in. lever pitch locking frame, which has remained substantially unaltered in design for 30 years. Many of the designs in use today of signal and point machines and facing point and lock detectors were his work. Among noteworthy locking frames built to his designs were those for Glasgow Central (374 levers) and London Bridge (311 levers). He designed in 1910-14 much of the all-electric apparatus installed on the Berlin Hochbahn. During the great war his skill in design was used in applying electro-pneumatic principles to torpedo fire control gear and to shell press door control. He was later associated with the development of colour-light signals, and all the most modern power signal equipment up to his retirement from the Westinghouse Brake & Signal Co. Ltd in 1937. His designs all bore the mark of an accuracy and neatness in detail characteristic of the man himself. Mr. Pearce was of a retiring disposition, a keen naturalist, horticulturist, and photographer, and was liked and respected by all who had the privilege of working with him.



Deputation accompanying the Lord Mayor on his visit to the Law Courts on November 9. Reading from left to right the members of the deputation are Colonel E. W. Crawford, Mr. O. G. Sunderland, the Clerk, Mr. W. McAuley Gracie, and Mr. W. A. G. Mitson.

TRANSPORT SERVICES AND THE WAR—12*

Marshalling yard operation in blackout conditions—Minister of Transport's visit to Acton—Train service alterations—The first pictorial war posters—The Netherlands Railways and the war

Continued attention, both in Parliament and in the popular press, to the subject of train lighting during the blackout has thrown into the background the widespread effect on goods transport operation of the lighting restrictions. Passengers have some opportunity of appreciating the unavoidable delays resulting from handling parcels traffic in darkened stations, and darkened vans, but the considerable operating difficulties occasioned by reduced lighting in goods stations and marshalling yards are not apparent to, and therefore not realised by, the average passenger. Some impression of the importance to the railway companies of adequate lighting in marshalling yards can be gained from the fact that in normal circumstances some 1,250,000 railway freight vehicles move 254½ million tons of traffic annually, equally about 5½ tons *per capita* of the population. Nearly 700 express freight trains were operated in peacetime to regular schedules every night, while, to keep the lines free for passenger trains during the day, a great deal of engineering and maintenance work on railway lines, bridges, and so forth, is carried out normally during the hours of darkness, under brilliant artificial light.

Since the outbreak of war the railways have been called upon to convey considerably increased tonnages of traffic, much of it extremely urgent, quite apart from the vast quantities of Naval and Military stores and equipment which they are carrying to ports for shipment, involving the running of many hundreds of special trains. Unfortunately, from the point of view of railway operating, this increasing traffic has coincided with drastic lighting restrictions, with the consequence that numbers of freight trains now have to be operated during the day, and it is impossible in every case to prevent the running of these freight trains reacting adversely on the passenger train services generally.

Minister of Transport's Inspection

At the invitation of the Railway Executive Committee on behalf of the four main-line railway companies, Captain Euan Wallace, the Minister of Transport, visited the Great Western Railway goods station and parcels depot at Paddington and the marshalling yard at Acton, on Thursday evening of last week, November 9, in order to gain first hand information of the difficulties under which the railways are at present operating as a result of the restricted lighting now in force. He was accompanied by Mr. R. H. Bernays (Parliamentary Secretary to the Ministry of Transport), Sir Leonard Browett (Secretary to the Ministry of Transport), and a number of other officers of the Ministry, including Mr. R. H. Hill, Lt.-Colonel A. H. L. Mount (Chief Inspecting Officer), and Colonel A. C. Trench (Inspecting Officer).

Paddington goods station, which was first visited, has 12 platforms, of a total length of 3,000 ft., which hold 310 wagons. Every day 21 inward trains and 15 outward trains are dealt with, representing an average daily tonnage of 2,300. The cartage equipment consists of 182 motor vans and 228 horse vans, and the average daily number of packages dealt with is 70,000. The staff employed totals 1,925. The party then proceeded to the Paddington parcels depot, which deals with 26,000 parcels a day, and employs a staff of 336; 84 motor vans are attached to the depot. Opportunity was then afforded for seeing the A.R.P. control

office, the control point for the wardens, fire patrols, first aid stations, decontamination squads, ambulances, and so forth, in the Paddington area. The Royal waiting room at the end of Platform 1 has been converted into a first aid casualty clearing station, and, since the outbreak of war, first aid has been rendered in more than 230 cases, chiefly injuries such as crushed hands and fingers, and sprains, caused by passengers stumbling at night on darkened platforms and staircases.

Acton Marshalling Yard

The main objective of the Minister of Transport's visit was the Acton marshalling yard which has 53 sidings, with a total length of ten miles and accommodation for 2,566 wagons. The staff numbers 89, and 6 locomotives are employed on marshalling work. It is typical of any one of large numbers of railway marshalling yards in various parts of the country. In peacetime Acton yard is illuminated at night by 84 flood lamps of high power, totalling in all 22,830 watts, in order that the work may be carried on under conditions as nearly approaching daylight as possible. On the outbreak of war the floodlights were removed and 76 low powered lamps were installed, giving a total wattage of 1,905, a reduction of 91 per cent. This has since been increased by substituting a smaller number of higher-powered lamps, and at present 57 lamps with a total wattage of 2,700 are being used, a reduction of 20,130 watts, or 88 per cent. compared with peacetime. This reduction was effected in order to comply with orders issued by the Home Office on the advice of the Service Departments.

Marshalling yards work on a principle of three shifts in the 24 hours, namely, 6 a.m. to 2 p.m., 2 p.m. to 10 p.m., and 10 p.m. to 6 a.m.; in peacetime most of the wagons are dealt with during the 10 p.m. to 6 a.m. shift. In a recent 24-hour period, 5,303 wagons were moved inward and outward, compared with 5,075 for the same period a year ago—an increase of 224 wagons. Between 6 a.m. and 10 p.m. 3,224 wagons were moved, compared with 2,780 last year—an increase of 444 wagons. But between 10 p.m. and 6 a.m. this year only 2,079 wagons were moved compared with 2,295 last year—a decrease of 216, due to the blackout. In other words the whole of the increased traffic has had to be worked in daylight or semi-daylight hours, and this represents a 12 per cent. increase in the number of wagons handled in daylight. Exigencies of space prevent wagons dealt with during daylight remaining at Acton throughout the day, and consequently special goods trains have to be run fairly frequently. This obviously retards the working of passenger trains, because the track capacity is not unlimited. Moreover, although fewer wagons can be dealt with at night, no saving in working costs can be effected, as the same numbers of staff and engines have to be employed. During the daytime additional expense has to be incurred by the provision of extra engine power.

As lighting in railway marshalling yards must be switched out immediately upon receipt of an air raid warning to comply with Home Office requirements, it became necessary to re-wire the lighting throughout every yard, and also to station a man permanently at the main light switch to ensure that, when necessary, every light is extinguished at a moment's notice. Some idea of the amount of work involved can be gained by the fact that on the Great Western Railway alone 136 marshalling and station yards have had to be re-wired. As a result of experiment it has been found possible to improve the lighting at some marshalling yards. These experiments, which are being continued, involve indi-

* Previous articles in this series have been "Transport Services and the Crisis," September 1, page 334; and "Transport Services and the War," September 8, page 358; September 15, page 382; September 22, page 410; September 29, page 442; October 6, page 467; October 13, page 495; October 20, page 525; October 27, page 557; November 3, page 589; and November 10, page 617

Seaford, will be added to the timetable. One of the considerable gaps in midday main-line services to which attention was drawn in our editorial article of October 20 will be broken by a new train at 12.45 p.m. from Victoria to Eastbourne and Hastings, and new late evening trains will run at 9.18 p.m. from Victoria to Bognor and Portsmouth and 11 p.m. to Brighton, with corresponding additions in the up direction. In the London suburban area the service between London Bridge and Streatham Hill is being restored during morning and evening business hours, and for the convenience of workers finishing duty at or about midnight six additional trains are being run on various routes. Until now 28 Southern trains had been reinstated since October 16, and the forthcoming alterations will add a further 95 trains to the emergency timetables. From next Monday the trains booked to arrive at the London terminals between 7 and 10 a.m. will represent 88½ per cent. of the normal service. Business trains remaining cancelled are mostly short-distance trains the need of which has been reduced since war began by the surrender of 26,000 season tickets. As from November 13, the Southern Railway reintroduced a number of parcel trains by which delays to ordinary passenger trains caused by the handling of parcels, especially after dark, have been appreciably reduced.

The forthcoming L.M.S.R. changes include new 8½-hr. trains between London and Glasgow, leaving at 1 p.m. A new train will leave St. Pancras at 9.15 p.m. for Edinburgh. Additional expresses will be put on between London and Birmingham, Liverpool, Manchester, Leeds, Bradford, Blackpool, and on cross-country routes. There will be numerous accelerations.

Train Lighting

The first of the G.W.R. main-line expresses to be fitted with white lighting was the 5.55 p.m. from Paddington to South Wales on November 10. Similar lighting is to be fitted to all main-line and suburban trains as soon as it is possible to manufacture the necessary fittings. It is estimated that the new system will need 80,000 special type shades as well as alterations to curtains and blinds. The L.N.E.R. has restored full lighting to more main-line trains. The L.M.S.R. announces that a scheme of lighting for suburban trains which will enable passengers to read, has been approved by the authorities. The work of adapting the hundreds of passenger vehicles to conform to the new regulations will be proceeded with as quickly as possible, though it is expected that some time will elapse before all L.M.S.R. trains are converted. Government officials are considering the possibility of returning to normal lighting on trains in the London Passenger Transport Board's area. This restoration, it is understood, would be subject to the provision that these lights could be switched off immediately an air raid warning was given, in which case the dim lights now in use would remain on.

The First Pictorial War Posters

The two semi-photographic posters we reproduce are the first pictorial posters to be issued by the main-line railways since the war began. They are produced by the Advertising & Public Relations Committee of the four group companies. These posters were designed by the L.M.S.R., produced by the S.R., under the chairmanship of the G.W.R., during which time the L.N.E.R. was occupied in dealing with the important question of type and letterpress posters—truly a joint and harmonious effort. The colour scheme, unfortunately not apparent in a reproduction, is national in effect, as one poster has a red background to the

white lettering and the other a blue background. The poster showing the driver looking out of his cab is being produced in 16-sheet size, i.e., 10 ft. × 6 ft. 8 in., and this is remarkable in view of the fact that the negative is only 1 in. × 1½ in. (miniature camera standard size). The printers, Waterlow & Sons, are to be congratulated on having carried out their task so successfully. These posters are the first effort to brighten railway premises, which, of necessity, became gloomy, due to the removal of so many cheerful peace-time pictorial posters.

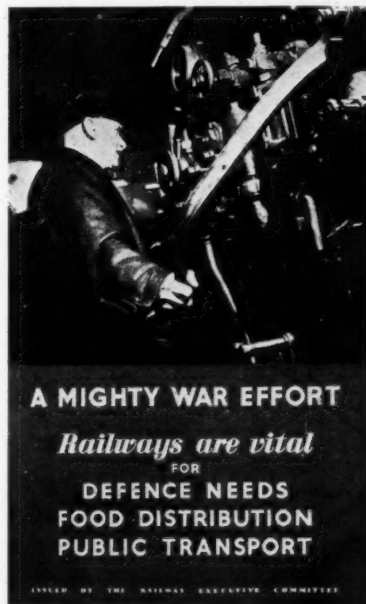
Locomotive for Overseas and Emergency Service

In our issue of October 6 we referred to the probability that some of the former R.O.D. locomotives would find their way overseas for a second time. We now understand that it is the intention ultimately to use some 300 of the celebrated Consolidation locomotives of Great Central design which are now L.N.E.R. Class "04," as well as 50 of the same design now running on the Great Western. In addition, 100 Great Western 0-6-0 goods engines, of the same type as served abroad during the last war, are also being sent overseas. To replace these locomotives, the L.N.E.R. is understood to be undertaking new construction of numbers of "02" three-cylinder standard 2-8-0s, and further "V2's" (2-6-2) of the "Green Arrow" class.

At home, arrangements have been made for certain loans of locomotives from one company to another, to be used in replacement of those sent overseas and for emergency purposes in connection with electrified lines. Thus, should the need arise, the L.N.E.R. would lend to the Southern Railway 0-6-2 tanks of the "N5" type, and would supply to the London Passenger Transport Board 2-4-2 tanks of classes "F1" and "F2," all ex-Great Central locomotives. Already a number of L.N.E.R. "J25" class 0-6-0 goods engines have been sent to the Great Western.

Increase in Channel Merchandise and Livestock Rates

Under authority of an Order made by the Minister of Transport on November 10, entitled the Railways (Increase of Through Rates) Order, 1939, the railway companies trading between Great Britain and Ireland and between Great Britain and the Channel Islands have given notice that, in consequence of the increased cost of operating sea services, all rates between Great Britain and Ireland, and between Great Britain and the Channel Islands will be increased from



The first pictorial posters issued by the main-line railways since the outbreak of war. As the accompanying notes show, they were a co-operative effort

November 20. The additions to existing through rates and port-to-port rates are as follow :—

	Increase
1. <i>Merchandise Traffic.</i>	
Traffic in—	
Classes 1 to 6 of British Railway Classification	5s. a ton.
Classes 1 and 2 of Irish Railway Classification	
Classes 7 to 10 of British Railway Classification	7s. 6d. a ton.
Classes 3 and 4 of Irish Railway Classification	
Classes 11 to 16 of British Railway Classification	10s. a ton.
Classes 5 and 6 of Irish Railway Classification	
Classes 17 to 21 of British Railway Classification	12s. 6d. a ton.
Classes 7 to 9 of Irish Railway Classification	
2. <i>Livestock.</i>	
Horses and mules and other beasts of burden	10s. a head.
Cattle and calves	4s. 6d. a head.
Pigs	2s. 6d. a head.
Sheep, lambs, and other small animals	1s. 6d. a head.
Wild animals	10s. a head.
3. <i>Corpses</i>	7s. 6d. each.
4. <i>Certain Traffic in the Passenger Train Classification not embraced in the foregoing.</i>	
Division I (milk)	9d. a can.
Division II (perishables traffic other than milk)	6d. a cwt.
Traffic in Divisions I and II charges at exceptional and special rates	6d. a cwt.
Groups 1, 2, 3, and 4 (Parcels Scales)—	
Up to 28 lb.	2d.
Over 28 lb. but not exceeding 56 lb.	4d.
Over 56 lb. but not exceeding 84 lb.	5d.
Over 84 lb. but not exceeding 112 lb.	6d.
Over 112 lb.	6d. a cwt.
Group 6 (Cycles, perambulators, &c.)—	
Articles in Sections (a), (b) and (c)	4d. each.
Articles in Sections (d), (e), and (f)	6d. each.
Miscellaneous traffic not otherwise provided for	6d. a cwt.

Railwaymen Join Up

More than 30,000 railwaymen have been released for service with H.M. Forces. Numbers of these men have specially trained in Transportation Units of the Supplementary Reserve and have been detailed to assist in the movements of the British Expeditionary Force. One of the results of the release of railwaymen to the Colours is the added difficulty of arranging train crews for extra freight trains which means fewer crews for passenger trains.

A Message from Mr. Missenden

The current issue of the *Southern Railway Magazine* includes the following message from Mr. E. J. Missenden, General Manager, addressed "to men and women of the Southern Railway":—

"The task of a General Manager controlling a large railway in peace time is arduous and exacting, but in wartime the drastic changes which have to be carried out in all sections of the railway industry bring with them increasing responsibilities. No one realises more than I that to undertake these responsibilities at the present time is only made possible in the sure knowledge that I shall have the same loyal co-operation and assistance of every member of the splendid team of Southern Railway men and women, as my distinguished predecessors.

"Our task in the opening weeks of the war has been a severe one, and it is gratifying to know that it has been discharged efficiently by each and all of you, and that it has merited the approval and appreciation of the authorities responsible for the evacuation schemes and for the transportation of the Fighting Forces.

"We have further tasks in front of us which will tax our individual efforts, and our resources, at times, to the uttermost, but we can be of good cheer in the knowledge that we are well equipped to play our part in preserving our national liberty. In doing so, do not forget the splendid goodwill that has been built up between our passengers and traders and ourselves, and endeavour to do all in your power to minimise the necessary inconvenience brought about by war conditions.

"May I mention a few of the more important points for each of us to remember:—

(1) Give our passengers every possible help and information in regard to their train journeys. Call out well the name of the station, particularly after dark. See that the train is properly heated during the coming winter months and that all the allowable carriage lighting is provided. Journeys are longer, and light and warmth will be appreciated.

(2) Freight traffic is so much greater than in peace time. Let our traders see that we can handle it efficiently even in wartime; give them all the help you can, both in regard to rates and services.

(3) Although we are under Government control, in the national interests we must not relax our efforts to ensure economy at stations, in the workshops and indeed in every department of our undertaking.

"As a life-long railwayman I fully realise the various difficulties under which you are working. Be of good cheer. Keep a stout heart. We shall win through."

The Netherlands Railways and the War

From the outbreak of the war the Netherlands Railways have been under the supreme control of the General Staff of the Army, but the management and operation are left in the hands of the railway authorities. The railway services were affected by three events, first a part mobilisation of the forces on August 24, then the general mobilisation on August 29-30, and finally the concentration of the armies in their defence positions on September 3-4. Normal summer services were maintained up to August 28, with a few restrictions, however, to allow preference to be given to all military traffic, both passenger and goods. All ordinary traffic was stopped on the day of the general mobilisation, August 29, when the railways were reserved entirely for military transport. On August 30 a much reduced service for civilian traffic was introduced. All electric and diesel services were withdrawn, but 6 to 8 passenger trains each way on the main lines and 2 to 4 each way on lines of minor importance were available for the public. Arrangements were made with light railway and bus companies, running parallel to the railways, to convey passenger holding railway season and ordinary tickets, and, where no parallel services were available, the railway company employed private bus operators to maintain facilities. The railway service for the public was again brought to a standstill on the two days of troop concentration, September 3-4, and the reduced timetable was reintroduced on September 5. Since that day the skeleton timetable has been supplemented gradually; the additional trains in every case have been brought to the notice of the public by special announcements. Electric and diesel services were reinstated on a small scale; they had been withdrawn by order of the military authority as these trains are not equipped for attachment to ordinary rolling stock at short notice, as required by the army. By the end of the summer timetable period, October 8, approximately 50 per cent. of the normal service was thus in operation. Summer time ended on that date, and the winter timetable was then to have been introduced, but, as revision had become necessary, it was not possible to begin the winter timetable service until October 15. From that day the normal, standardised timetable, almost identical to the summer timetable, came into force. The exceptions are the withdrawal of passenger accommodation from the night mail trains, and the suspension of almost all international services.

The services into Belgium have suffered least of the international routes; 6 through trains each way are run via Roosendaal and Eschen, namely, one dining car express Amsterdam—Brussels—Paris and back, two dining car expresses Amsterdam—Brussels (Nord) and return, and three fast trains Rotterdam—Antwerp both ways. Two through services each way are maintained between Amsterdam and Liège via Maastricht and Visé, involving change of carriages at Maastricht, however. Through traffic on the four main lines running into Germany has been withdrawn. Local trains are running between the stations on each side of the frontier, and a change of trains is necessary at both frontier stations. There is one exception, for, curiously enough, the Flushing—Cologne express is still running, although there is no boat connection at Flushing. All these trains are run at their pre-war speeds, though at altered times. The Hook and Flushing boat trains do not run, as no boat connections operate. The L.N.E.R. Parkeston Quay to Hook, and the Zeeland Company's Flushing to Parkeston Quay boat services were withdrawn at the beginning of the war. The Zeeland Line now maintains a service between Flushing and Tilbury at irregular intervals, about once every five days. The Batavier Line operates its normal route between Rotterdam and Gravesend in connection with the Southern Railway, thrice weekly, but there is no train connection with this company's landing stage in Rotterdam.

No alterations have been made in the passenger and goods rates and fares in Holland, with the exception of the withdrawal of the summer return tickets. Ordinary day return tickets between all stations, valid one day, or from Saturday

or Sunday till Monday, are still available, as also are the cheap evening return tickets valid between 5.30 p.m. and 8.15 a.m. on one or two additional trains during the day. A rather unfortunate circumstance is that the railway centenary celebrations have had to be abandoned on account of the war, and this is the more regretted as, in exactly similar circumstances 25 years ago, the elaborate preparations for the 75th anniversary jubilee came to nought.

Branch-Line Closure in France

Over a year ago the French National Railways Company began a programme of closing to passenger traffic branch lines, and reference to this has been made from time to time in the columns of THE RAILWAY GAZETTE. Towards the end of September public notice was given of large numbers of closures which were to become effective with the introduction of the winter timetable. Our Paris correspondent has now supplied us with the following full list of lines in the South Western Region which were closed to passenger traffic from October 2:

St. Rémy-les-Chevreuse to Limours-Terminus
Orly to Massy-Palaiseau
Etampes to Auneau-Embranchement
Chartres to Auneau-Embranchement
Pithiviers to Argent
Orléans to Gien
Gien to Argent
Blois to Villefranches-sur-Cher
Port-Boulet to Port-de-Pile
Ligré-Rivière to Richelieu
Loudun to Chatellerault
Loudun to Airvault
Chatellerault to Le Blanc
Montreuil-Bellay to Poitiers
Argenton-sur-Creuse to La Châtre
Champillet-Urciers to Lavaufranche
Montluçon to Gouttières
Ribérac to Mussidan
Mussidan to Bergerac
Marmande to Eymet
Hautefort to Terrasson
Terrasson to Sarlat
Sarlat to Gourdon
Le Dorat to Magnac-Laval
Le Dorat to St.-Sulpice-Laurière
Langon to Bourriot-Bergonce
Bourriot-Bergence to Gabarret
Castelsarrasin to Beaumont-de-Lomagne
Montauban to St. Sulpice (Tarn)
Bédarieux to Plaisance-Andabre
Narbonne to Bize
Moux to Caunes-Minervois
Rivesaltes to Quillan
Pamiers to Moulin-Neuf
Limoux to Belvèze
Sète to Montbazin-Gigean
Lodève to Vias
Colombiers to Quarante-Cruzy
Bram to Lalevanet
Condom to Castéra-Verdun

The Russian Railway Position

The view is widely held that the U.S.S.R. is severely handicapped by inadequate transport, and in our issue of October 13 (at page 498) we summarised a German military opinion recently expressed by Colonel Hesse in *Kriegswirtschaftliche Jahresberichte* indicating that, for many years to come, the state of the Russian railways will remain the weakest point in the military-economic capacity of the Soviet Union. A further interesting contribution on the subject was published a short time ago in the columns of the *Manchester Guardian*. This was an article by Monsieur A. Masloff analysing a report by Monsieur Malysheff, the U.S.S.R. Commissar for the Construction of Heavy Machinery. The Commissar finds three main shortcomings in the production of locomotives: (a) inadequate use of locomotive building capacity especially the principal works, such as Kolomna, Putiloff, and Sormovo; (b) almost incredible waste of raw material and machinery; (c) inadequate quality of output. M. Malysheff states that during the past year 1,500 modern lathes in these works remained idle, as they were too modern, and there were no specialist workers who could use them. The lathes used were worked only to 44.9 per cent. of capacity; the automatic and quasi-auto-

matic lathes were frequently out of action. The percentage of spoilt work in the "model" Kiroff works was very considerable; for instance, work to the value of 20,000,000 roubles was spoilt during the production year 1938-39. The report indicates, moreover, that clerical work connected with orders usually takes longer than the actual construction of the locomotives. The scrap metal lying about in the shops at the Kiroff works is stated to total 85,000 tons, and the loss caused by incapacity to make proper use of the equipment is estimated at 23,000,000 roubles. At Kolomna, the metal workshops spoilt output to the total value of 900,000 roubles, and 300,000 hours' work of the modern lathes was wasted, "equivalent to 16,000,000 roubles, or 80 locomotives of the 'SU' type." Lathes were out of action for 62,000 working hours, "equivalent to 50 'SU' locomotives." At Kolomna "there are 1,867 engine-builders at work, and about a thousand of them are occupied entirely on repairing defective work from the lathes." Parts are regularly turned at the lathe and subsequently adjusted by hand. These works have not yet grasped the possibility of assembling mouldings; consequently they build gigantic moulds in which these are cast whole, with the result that the percentage of condemned castings is enormous. Rails are stated to be so bad that 20 per cent. are useless. The commissariat for "black metals" itself calls its output of rails "third quality."

Canadian Transport and the War

The Ocean Limited, the Montreal-Halifax passenger train of the Canadian National Railways, held what is believed to be the first railway blackout on the American continent under air raid precautions plans, states our Canadian correspondent under date October 25. As the train approached the city limits, lights were extinguished and shades were drawn. The locomotive headlight, however, remained burning. Orders for rolling stock totalling \$25,000,000 were awarded on October 25 by the Dominion Government to five manufacturing plants of railway equipment on behalf of the Canadian Pacific and Canadian National Railways, designed to fill the needs of the two railway companies during the war years. The two railways have ordered equipment, some of which is not required at present, because there is every likelihood that within a short time the manufacturers of railway rolling stock will be swamped with orders for ammunition and other war supplies and will be unable to take orders for railway equipment. It is understood that a time limit will be placed on delivery, so that the orders should be completed as quickly as possible, and before the demand for ammunition becomes great. The railways are ordering through the Dominion Government because it is providing the credits. This course is being adopted in preference to borrowing in the open financial market, because it is believed that the Dominion Government does not favour large new bond issues by public utility concerns at this time, when the Government itself might make an appeal to the public to buy war bonds. That the two railway companies would have plenty of rolling stock available for the carrying of Canada's commerce, in ordinary conditions, is indicated by the fact that both of them have thousands of freight cars in railway sidings across Canada loaded with wheat, which has overflowed from the limited storage available in grain elevators. Despite this condition, the order calls for 4,575 new freight cars, of which 3,275 will go to the Canadian National Railways. The C.N.R. will take equipment worth \$15,000,000, and the C.P.R. will have the remainder.



STAFF AND LABOUR MATTERS

Pay of Employees Serving with H.M. Forces

Members of the permanent staff of the main-line railway companies and the London Passenger Transport Board who, during the present war, are called up for service with His Majesty's Forces or who are giving full-time service with civilian defence services will, in cases where the civil pay is in excess of their service emoluments, receive the balance of their civil pay to bring up their total emoluments, service and civil, to the level of their civil pay. This decision has been given by the Railway Executive Committee and is embodied in a circular which has been issued by each of the companies and the board to their respective staffs.

For the purpose of calculating the civil pay, an employee will be credited with any increment which may become due on the salary or wages scale of his appointed post during his absence. Civil pay is understood to mean the salary or rate of pay of the post to which the employee was appointed at the time of his release from the service of the company or the board, and does not include payments in respect of overtime, night duty, Sunday duty, or piecework earnings. The arrangements apply as from the outbreak of war, namely, September 3,

R.S.N.T. Decision No. 6

A special delegate conference of the National Union of Railwaymen, which met in London on Thursday, November 9, accepted the majority findings of the Railway Staff National Tribunal. These findings, which were, by Sir Arthur Salter (Chairman of the tribunal) and Mr. H. J. May, recommended for male staff a minimum rate of 50s. in London, 48s. in industrial areas and 47s. in rural areas; and for women 38s. in London, 36s. 6d. in industrial areas and 35s. in rural areas. Mr. John Marchbanks, General Secretary of the N.U.R., said after the meeting that various proposals had been put forward by delegates before the final decision was made. Acceptance of the majority report was without prejudice to any further application which might be submitted to secure the full 50s. minimum for all grades. The conference also made it clear that in dealing with the war situation and any increases in wages that became necessary, the present findings of the tribunal should not be set off against any war increase. The companies would now be asked to apply the findings of the majority report.

Any difficulty or refusal of the companies to do so would necessitate the calling of another special delegate meeting. Very strong views were expressed in the conference that the 50s. minimum ought to have been conceded in industrial and rural areas as well

as in London. The conference was emphatically of the opinion that nothing short of 50s. as the minimum rate would meet the position, apart entirely from any increases necessitated by the war. "It should be recognised," Mr. Marchbanks concluded, "that the conference was giving consideration to findings of the tribunal which arose from an application submitted and dealt with on the basis of the position existing prior to the outbreak of war."

The A.S.L.E.F., as announced in our issue of November 3, has accepted the decision and the Railway Clerks' Association met on November 19 to consider the decision. The railway companies have not yet announced their attitude towards the decision.

Railway Wages

Having agreed to accept the majority findings of the R.S.N.T. the special delegate conference of the National Union of Railwaymen decided on Friday, November 10, to claim an increase of wages on account of war conditions and the advance in the cost of living. The hearing of the applications for better conditions on which the tribunal issued its findings on October 18, took place towards the end of September, and the union points out that all the considerations on which the tribunal made its decisions belong to the period before the war. This contention is borne out by the statements in the award that no information had been available about railway receipts and expenses since the outbreak of war and, even if it had been, the shortness of the period would have afforded an inadequate basis for estimating receipts and expenses "in a period of incalculable possibilities." In the circumstances, therefore, the tribunal based its conclusions on the financial position of the railways as it was up to the outbreak of war.

What war increase should be claimed the delegate conference did not decide, but left the amount and the prosecution of the claim to the executive committee. The wages of the majority of railway employees, as announced in our issue of October 20, are already covered by a cost of living sliding scale under which, if the cost of living index figure remains at its present level, many grades will receive 2s. a week increase in January next.

Railway Shopmen

The employees' side of the National Railway Shopmen's Council has submitted to the council claims for a general increase in wages, with particular stress upon the case of men employed as plain time workers, and for a minimum rate of 50s. a week. Comprehensive claims for increases in wages and improvements in conditions of service for railway shopmen were referred to the Industrial Court in

June last when the Court found against the whole of the claims.

Machinery of Negotiation for Railway Shopmen

The special delegate conference of the National Union of Railwaymen, on November 11, reviewed the position in regard to the notice which the union had given of its intention to withdraw from the Machinery of Negotiation for railway shopmen. Apparently, the railway companies have asked the union to re-consider its decision to withdraw from the negotiating machinery in view of the present situation. The special delegate conference, however, decided to adhere to the decision to withdraw from the machinery. The notice to withdraw from the machinery expires on November 24.

Industrial Court Award No. 728 Interpretation

The Industrial Court, on November 1, heard a question which had arisen between the National Union of Railwaymen and the London & North Eastern Railway as to the interpretation of paragraph 43 of Award No. 728. Paragraph 43 of Award No. 728 is as follows:—

"The Court's decision will cover all the more important classes of workmen at all or practically all the places where they are employed. Some men may not, however, be provided for in the schedules, but it is not anticipated that serious difficulty will arise in determining the position of such men on the basis of analogy to the classes specifically dealt with, and it is the intention of the Court that their position should be so determined. In the event of any questions arising in this respect, or in respect of any other part of the decision, it shall be open to any party affected to refer the question to the Court for settlement."

The union submitted that any question arising out of the application of Award No. 728 can, under the provisions of paragraph 43, be submitted to the Court by any of the parties to the original award. In particular they relied on the words "in respect of any other part of the decision" which, in the view of the union, permit any party to Award No. 728 to bring to the Court any question arising out of the application of that award. The company argued *contra*.

The Court takes the view that the interpretation of the words "in respect of any other part of the decision" has to be considered having regard to the matters which were remitted to the Court for determination and to the context of the paragraph in which the words appear. Paragraph 43 is the last paragraph in Award No. 728 and its purport, in the opinion of the Court, was to make provision for a method of dealing with those matters which had not been specifically dealt with in the decision. Paragraph 43 starts by giving an instance, namely, that some men may not be provided for in the schedules.

The paragraph points out that the parties may be able to determine "the position of such men on the basis of analogy to the classes specifically dealt with" and that if they fail to do so any party can refer the matter to the Court for settlement. In a case of the magnitude of the one dealt with it was not unlikely that the Court might need to give a deferred judgment on such points. Having given

the specific instance and pointed out the method of dealing with it by agreement, the award, when dealing with references to the Court on the specific instance provides for references on similar matters in the award generally.

Questions arising in regard to the enforcement of any of the provisions of the award are not, in the view of the Court, matters proper to be referred to the Court under the provisions of

paragraph 43. The Court cannot arrogate to itself a jurisdiction to enforce its awards, nor by the provisions of Award No. 728 did it do so. Where a matter is referred by a party to the Court under paragraph 43 the Court will determine whether the question is one which falls within the provisions of that paragraph, and by Award No. 1739, dated November 9, 1939, the Court ruled accordingly.

QUESTIONS IN PARLIAMENT

War Rates Insurance

Sir John Wardlaw-Milne (Kidderminster—C.), on November 7, asked the Minister of Shipping whether he was aware that coastal services were penalised, as compared with rail services, by having to bear the cost of war risks insurance of ships, while, under the terms on which the Government had taken over the railways, all war damage to railways and rolling stock would be made good free of insurance premiums; and what action he was taking to place shipping on an equality with the railways in this respect.

Sir John Gilmour (Minister of Shipping): I am informed that the terms mentioned by my hon. friend do not correctly describe the arrangements made by the Government with the railways, but the whole question of the burden falling on coastal services is being examined as a matter of urgency by my Department in consultation with the Board of Trade and other departments concerned, and I hope soon to be in a position to make a statement on the matter.

Requisitioning of Vehicles

Captain W. F. Strickland (Coventry—C.), on November 8, asked the First Lord of the Admiralty how many road motor goods vehicles had been impressed and requisitioned, respectively, for use by the Admiralty; and how many of these were the property of railway companies.

Mr. Geoffrey Shakespeare (Parliamentary Secretary to the Admiralty): 318 road motor goods vehicles have been requisitioned for Admiralty use; none of these was the property of railway companies.

Derwent Valley Light Railway

Major W. H. Carver (Howdenschire—C.), on November 8, asked the Minister of Transport whether he was aware that the Derwent Valley Light Railway was a normal gauge line and formed an integral part of the main-line system; and whether he was prepared to take over control of this, as if it were to cease to function, it would have a serious effect on the various industries in the East Riding of Yorkshire.

Captain Euan Wallace (Minister of Transport): The position of this light railway has been repeatedly considered, and as at present advised I am not satisfied that it constitutes a sufficiently

important part of the railway system of the country to justify my taking control of it under emergency powers. In view, however, of my hon. and gallant friend's representations, I propose to have the question re-examined.

Mr. H. Morrison (Hackney South—Lab.): Having regard to the fact that this attempt at socialisation comes from a Conservative quarter, in order to get the railway out of a tight corner, will the Minister look on the suggestion with a good deal of suspicion?

Major Carver: Is the Minister aware that he has taken over light railways in Kent and Shropshire and that this light railway is run by L.N.E.R. engines, and will he reconsider the matter?

Captain Wallace: I took over these particular railways because I was satisfied that they were a sufficiently important part of the transport system. I shall treat this on the same lines.

Compensation for Control of Railways

Mr. G. Ridley (Clay Cross—Lab.), on November 8, asked the Minister of Transport whether he could now say what financial arrangements had been made between the Government and the undertakings under the control of the Railway Executive Committee.

Captain Euan Wallace: I regret that I am not yet in a position to add to the answer which I gave to the hon. member on October 4.

Mr. Ridley: Can the Minister say what difficulties are standing in the way of a settlement of this case, and how much longer this uncertainty is likely to exist?

Captain Wallace: This question is extremely far-reaching and extraordinarily difficult and complicated. It is under discussion between my Department and the railway representatives, and the hon. member may rest assured that every effort is being made to reach a satisfactory settlement with the least possible delay.

Special Cheap Day Tickets

Flight-Lieutenant Grant-Ferris (St. Pancras, N.—C.), on November 8, asked the Minister of Transport whether he could now arrange for some form of cheap day tickets on the railways in order to enable parents of evacuated children to visit them.

Captain Euan Wallace: The whole question of issuing special cheap day tickets, where these are not already in

existence, to enable parents to visit their children in the reception areas is under active examination, in consultation with the Secretary of State for Scotland, the Minister of Health, and the President of the Board of Education, and I hope it may be possible to make an announcement very shortly.

Impressment of Motor Vehicles

Captain W. F. Strickland, on November 8, asked the Secretary of State for Air how many road motor vehicles had been impressed and requisitioned respectively, by his department; and how many of these were the property of railway companies.

Sir Kingsley Wood (Secretary of State for Air): No road motor vehicles have been requisitioned by the Air Ministry, but 971 have been purchased by impressment. None of these was the property of railway companies.

Co-operation between Trains and Buses

Sir Reginald Blair (Hendon—C.), on November 9, asked the Minister of Transport if he was aware of the lack of co-operation in the timetables of the London Passenger Transport Board buses and the railway company at Gerrard's Cross station, particularly in the evening, causing inconvenience and expense to passengers who, except for the rationing of petrol, would be using their motorcars; and would he make representations for the departure of the last bus from Gerrard's Cross to be delayed when the arriving train was a few minutes behind time.

Captain Euan Wallace: I am informed by the London Passenger Transport Board that, so far as is consistent with the running of bus services at fixed and regular intervals, the buses serving Gerrard's Cross station connect with trains to and from London. Members of the board's staff have instructions to wait up to 3 min. if a train is late, and recently an inspector has been on duty at the station and has exercised his discretion to hold the buses for longer periods where this can be done without interfering unduly with the timetable for the journey in question and for subsequent journeys. The bus which leaves Gerrard's Cross at 10.16 p.m. for Chalfont St. Giles has on occasion been held for as long as 9 min. in order to make the connection with the train from Marylebone; the board is exploring the whole position to see whether anything further can be done in the matter.

RAILWAY AND OTHER MEETINGS

Central Argentine Railway Limited

The annual general meeting of the Central Argentine Railway Limited was held at River Plate House, Finsbury Circus, London, E.C., on November 9, Mr. W. Howard-Williams, C.B.E., Chairman of the company, presiding.

The London Manager and Secretary (Mr. Ronald Leslie) read the notice convening the meeting and the auditors' report.

The Chairman, in moving the adoption of the report and accounts, said:

What I wish to say to you today will fall under two heads of unusual contrast. The first, a short review of the results of your railway for the 12 months which ended on June 30 last, the period covered by the balance sheet, we shall ask you to approve at this meeting. The second head, and the more complicated one, an attempt to estimate, on the basis of the latest information, what are likely to be the course of events for the Central Argentine for the new 12 months' period upon which we have embarked from July 1 last. The sharp contrast between the two periods is of course the result of the outbreak of war after two months of the new period had elapsed. This obviously has introduced a series of fresh factors.

At our last meeting I was able to refer optimistically to the prospects of the approaching wheat harvest. I am glad to say that those references were fully borne out by events, and the result was a bumper wheat harvest surpassing anything previously known with the single exception of the year 1928-29. As a result our earnings from wheat compared with those of the previous year, when this harvest was largely a failure, showed an increase of no less than £1,164,000.

This favourable showing, however, was considerably discounted by unfortunate happenings in regard to the maize harvest. Here, for the second year in succession, an almost unprecedented occurrence, unsuitable weather, *i.e.*, drought and scorching winds at the critical period during December, did widespread damage and reduced a highly promising prospect to a harvest no better than the poor outcome of the previous year. Since, therefore, there was neither a substantial carry-over of maize from the previous year, as normally happens, nor heavy production of the same cereal in that under review, and since other traffics, especially general merchandise, and main line passenger receipts continued to show the decline consequent upon road transport competition, a world-wide feature of railway operation, the final upshot was that our intake, despite the excellent wheat carryings, when compared with the year before, increased by no more than £105,000.

When, however, we turn to net revenue, the showing is considerably improved, since there is an increase over the previous year of £333,000 in round figures. When we remember that we have to be continually lowering tariffs to meet new competition from the roads, and, I might add, in some cases from the Argentine State Railways, it means that continually more work has to be done to secure the same amount of revenue. I then submit this result is a source of legitimate satisfaction. Though schemes to obtain economy without jeopardising efficiency come but slowly to fruition, I think we have clear evidence from the figures I have quoted that the labours of our operating staff have not been unavailing.

We must still deplore that the holders of the preference and ordinary stocks remain without the moderate dividends to which the services we render Argentine national economy do in our opinion entitle them. This view we shall continue to press upon the Argentine authorities, and I have sufficient confidence derived from personal knowledge of their sense of equity to believe that they will not wish indefinitely to accept a situation whereby the country receives the benefits of a high-class railway system whilst no benefit whatever accrues to those who have provided the capital therefor. At the same time it is not too much to say that the last 12 months have seen in my belief an increasing appreciation by the Argentine Government of the needs of the railways.

I now pass to the second head—namely, the prospects for the year on which we have already entered. The first two months, that is July and August, of this period made a good beginning. The reason is again the carry-over from the bumper wheat crop to which I have already referred as having been so great a help to us in the year ending June 30 last. The result was that at the end of August our gross receipts showed an improvement, at the rate of exchange at which we receive our remittances, of as much as 3,300,000 pesos, or, say, £205,000, over the corresponding two months of the previous year.

With the beginning of the third month, that is September last, a whole series of new factors were launched upon us by the outbreak of war. Some obviously are adverse whilst others, despite the general dislocation, may prove of some assistance to Argentine railway shareholders.

As we at present stand we can recognise as prejudicial the heavy increase in freights and insurance, as well as the increased cost of fuel and probably most other materials. These are bound to involve many thousands of pounds of increased expenditure to us.

Already up to the end of October I calculate that we have had to disburse an additional £45,000 under the headings I have mentioned. At the same rate this would mean a further £180,000 for the remaining eight months of the financial year, and this figure may be considerably exceeded. I say this because, though we are at present able to maintain our existing sources of supply (even though at increased prices) and hope this may continue, there is no certainty that this will be the case.

On the other side of the picture, the country we serve is outstanding as a producer of primary commodities, the demand for which is considerably stimulated by a state of war. This has already occurred to some extent in the case of wheat, where the Argentine Government a few days after the declaration of war was able to abolish its guaranteed minimum price. The same increased demand also applies to meat and wool. Whether we of the Central Argentine carry much or little of these commodities, their ready sale helps the economy of the Argentine, and consequently tends to strengthen its currency.

The depreciation of the Argentine peso since 1931 has been above everything else the source of our troubles. The factors at work have already caused it to improve from approximately 20.30 pesos to the £ to 17 in the public market. In addition, by recent decree, the rate for the payment of essential imports was reduced to 15 pesos. As the bulk of railway stores comes under this heading, we shall receive the advantage as against the previous rate of 16 which was itself a preferential one to us. By this we should benefit, in very round figures, by some £100,000 a year, if the supply of stores from this country to the Argentine is maintained on more or less the normal scale. As the next step in a logical sequence, the railways now are asking that the rate of remittance of financial requirements should also be lowered substantially.

War conditions may also enhance the working costs of road motor services of all kinds which are today in competition with us. A hand-to-mouth existence is the lot of the majority even now, and higher prices for such items as their fuel or spare parts may prove beyond them, with consequent reversion of traffic to the railways.

If we are to take the last war as a guide, it was only after hostilities had ceased and the exhausted belligerents under peace conditions were replenishing their supplies from the inexhaustible fertility of the Argentine that marked improvement in the situation of the Argentine railways took place. The same may apply again.

The latest information by mail from Buenos Aires as to crop prospects is that the area under cultivation of wheat is some 30 per cent. less.

The report and accounts were adopted.

Buenos Ayres Western Railway Limited

The annual general meeting of the Buenos Ayres Western Railway Limited was held at River Plate House, Finsbury Circus, London, E.C.2, on November 15, Sir Follett Holt, K.B.E., Chairman of the company, presiding.

The Secretary (Mr. N. F. E. Grey) read the notice convening the meeting and the auditors' report.

The Chairman, in moving the adoption of the report and accounts, said that a few days ago he addressed the proprietors of the Great Southern Railway; he hoped when happier days arrived the then more fortunate Chairman would be called upon to address only one meeting, that of the combined railways. They were very closely allied now, and except in accounts and finance were worked as one; but they would not be able to reach finality that was to secure the maximum economy in operating which was their objective until the Pooling Bill had been passed by Congress. When that happened the Argentine Government would have the power to permit the amalgamation of the two systems and their directors would be in a position to prepare a plan for their consideration should it then be thought wise to bring it into effect. Last year when he addressed the shareholders he had to deal with a disastrous period, one of the worst, if not the worst, the Western had ever suffered, and one that spelt impoverishment to the company and those it served. No immediate recovery could be expected, and, although during this last year they had a better crop, at least of wheat, there were many gaps to fill, and whilst their receipts gave them an increase of £82,000 the expenses which they felt obliged to charge to revenue increased by £108,000. When making comparisons this increase became a matter of book-keeping, for if renewal expenditure had been charged to renewals reserve as in the previous year, there would have been an increase in net receipts of £38,000 and not a decrease of £26,000. Had this been done, however, the revenue this year might have suffered on account of a recent interpretation of the rules governing the President's award with regard to labour, and it was in their interest inadvisable to take that risk. On the liability side of the balance sheet would be noticed a substantial increase in the amount due to creditors and on the asset side a substantial increase in the cash at banks. This was due to the fact that in the arrangement under the Presidential Labour Award an amount was retained from wages. This amount increased the cash shown in the balance sheet but has had to be reserved for until it is definitely decided, the subject still being under discussion, as to how much under the Award remains to be

returned. The balance remaining would have decreased the year's expenditure and therefore increased the year's profits. It followed, therefore, that the net receipts might be, and probably were, appreciably better than they had been able to show.

During the year, the Chairman continued, in order to avoid default in meeting debenture and other charges, it became imperative to raise a further sum to replace revenue monies spent in the past for capital purposes, the shortage of cash having been brought about by the terribly bad cycle of crop years they have been through. But having met these charges did not lessen their distress in being unable to recommend any distribution to holders of the preference and ordinary stocks of the company amounting to £20,000,000 which have remained without remuneration. This was hard indeed on the preference stockholders, for their interest was non-cumulative, and hard also on the ordinary stockholders who, however, had at least the consolation of knowing that when climatic conditions and therefore traffic receipts and exchange again reached more normal levels there would be no heavy accumulations of unpaid dividends to be met before they could receive a dividend. On the asset side a notable decrease in the capital account debit would be noticed; this was due to the deduction of the cost of the Saladillo branch and to the addition of the new 5½ per cent. debenture stock. Arising out of the same operation there was an increase in investments in associated companies as the Southern debentures received for the Saladillo branch were included under this heading at the cost price of the branch. The increase in advances to associated companies referred mainly to the B.A. Midland, who had been modernising its service by the introduction of diesel railcars. For the rest the traffic figures for the last 10 years given in the statistics showed how, with a touch only of better weather as happened last year, the business of the railway could recover. They had, he thought, seen the worst, at least for the time being, of road competition, and it was clear that they were now holding their main passenger and general goods traffic. What they needed, and it was due, was a cycle of good weather, then grain and maize tonnage and all dependent traffic would substantially increase, the ratio of working costs to receipts would fall and earnings even at the present rate of exchange would reach a far more satisfactory figure. In the chairman's opinion the Western remained a good going concern capable under more normal circumstances of producing much better results.

In their constant endeavour to improve the conditions under which the

railways worked they had been concerned since the last meeting in important negotiations carried on by the Argentine Government in a helpful spirit. The outstanding subject awaiting decision when war broke out was the rate of exchange for railway remittances. The official buying rate was then 15 pesos and the selling rate 17 pesos to the pound, and although the railways were conceded a halfway rate of 16 pesos, this they were urging did not give sufficient relief. Now war had interposed and Argentina, with its wonderful productivity of foodstuffs, was benefiting by the heavy demands from Great Britain, this favourably affecting the balance of trade and consequently exchange, and a further concession in the rate for their stores to 15 pesos had now been approved. Based on last year's figures this should mean an advantage of £32,000. Negotiations were still proceeding in an endeavour to obtain a still better rate for all their remittances, including those for their financial services. The last concession in the exchange rate, slight as it was, was welcome in view of the increasing war prices of coal, oil fuel and all stores. Last year they used 70,000 tons of coal and 40,000 tons of fuel oil. The coal was from South Wales but the fuel oil was wholly supplied from the oilfield at Comodoro Rivadavia, in which the company had fortunately a one-third share. Some time ago, in view of the possibility of war, the drilling programme was intensified, and for the first seven months of this calendar year production increased by 22 per cent.

With the uncertainties of war, it was not possible to predict what might happen to the results this year, but with an accumulation of grain to be carried, they made a better start in July, reflected by an increase of 7.5 per cent. in their traffic receipts to date with but little change in expenses. They would certainly have a more prosperous population to cater for, and reports on crops, pasture lands and cattle were so far very satisfactory. The area under fine grain was reported to be some 9 per cent. greater than last season and abundant rains had favoured the crops. Maize was being sown under excellent conditions and an increased area was expected. The general rains had benefited the outside camps which through drought had become denuded of cattle. These were now being restocked and animals were in good condition. Fruit prospects in the Colonia Alvear district could not be better. The steady increase in local passenger traffic should continue and long-distance travel benefit by more prosperous conditions. There was, therefore, good reason to expect that the chairman at next year's meeting would have a more pleasant task than had been the case through a black page in railway history and bad climatic period for the Western.

The report and accounts were unanimously adopted.

NOTES AND NEWS

L.N.E.R. Push-and-Pull Services in Durham.—A push-and-pull unit consisting of a locomotive and three coaches is now working certain passenger services between Sunderland and South Shields, West Hartlepool, and Hetton, L.N.E.R.

Classification of Lubricating Oils.—The classification of pure mineral lubricating oils, which was issued as B.S. 210 in 1924, has just been revised, and copies may be had from the British Standards Institution, 28, Victoria Street, S.W.1, price 2s. 2d. post free.

London Transport "C" Stock.—The committee watching the interests of holders of London Passenger Transport Board "C" stock has decided that as the Government is now in control of the board's undertaking, no useful action can be taken at present on the board's failure to pay the statutory 5½ per cent.

Institute of Transport Arrangements.—The annual general meeting of the Institute of Transport will be held on December 11 at 2.30 p.m. at the Charing Cross Hotel, London. Captain Euan Wallace, Minister of Transport, will afterwards give an address. Monthly luncheons, also to be held at the Charing Cross Hotel, have been arranged for January 8, February 12, March 11, and April 8. Addresses will be given on the respective dates by Mr. Ernest Bevin, Lord Stamp, Mr. Robertson F. Gibb, and Mr. Frank Pick.

Trading with the Enemy.—The Board of Trade has made an Order amending the Trading with the Enemy (Specified Persons) Order dated September 13 and the Trading with the Enemy (Specified Persons) (Amendment) Order dated September 30. The new Order, which is called the Trading with the Enemy (Specified Persons) (Amendment) (No. 2) Order, came into force on November 7. The original Order directs that 278 persons or firms, carrying on business in various foreign countries, shall be deemed to be enemies for the purpose

of the Trading with the Enemy Act, and the first amending Order made 36 additions, 4 deletions, and 21 amendments. The new Order makes 81 additions, 7 deletions, and 13 amendments.

German Railway Accident.—It is reported that a head-on collision occurred on Monday last between two local passenger trains between Langlieben and Rosengrund, on the single-line branch between Cosel and Bauerwitz in Upper Silesia, and that 43 persons lost their lives.

Special Trains for Newbury Races.—For each day of the race meeting at Newbury (November 15 and 16) the G.W.R. made special train arrangements, including two special trains from Paddington—one non-stop with coaches reserved for members. Special connections with the racecourse station were provided for passengers travelling from the provinces.

Argentine Railway Earnings.—The financial year ended June 30, 1939, showed a total of gross earnings for the privately-owned Argentine railways, of 406,973,300 pesos m/n., an increase of 3,939,000 pesos, or 1 per cent. over the corresponding total for the previous financial year. The gross earnings of the British-owned railways, included in the above figures, were 366,220,000 pesos, or 1,403,000 pesos (0.4 per cent.) more than in 1937-38. With the exception of the Buenos Ayres Great Southern, all the British-owned lines recorded increases, with the Argentine North Eastern as the best. Total passenger receipts fell to 85,322,000 pesos, 4,251,000 pesos, or 4.7 per cent., less than in 1937-38, although the number of passengers, 155,376,000, was 2.8 per cent. greater. The reduction in passenger receipts, however, was more than compensated by the increase in goods traffic, which reached a total of 273,452,000 pesos, or 9,394,000 pesos (3.6 per cent.), more, tonnage having increased to 34,521,000, or 4.1 per cent., over 1937-38.

Irish Traffic Returns

IRELAND		Totals for 45th Week			Totals to Date		
		1939	1938	Inc. or Dec.	1939	1938	Inc. or Dec.
Belfast & C.D.	pass.	£ 2,070	£ 1,628	+ £ 442	£ 118,620	£ 113,758	+ £ 4,862
"	goods	509	480	+ 29	21,014	19,743	+ 1,271
"	total	2,579	2,108	+ 471	139,634	133,501	+ 6,133
Great Northern	pass.	9,500	8,250	+ 1,250	513,050	505,650	+ 7,400
"	goods	13,550	10,300	+ 3,250	488,500	419,100	+ 69,400
"	total	23,050	18,550	+ 4,500	1,001,550	924,750	+ 76,800
Great Southern	pass.	27,897	27,949	— 52	1,676,017	1,681,220	— 5,203
"	goods	64,335	55,019	+ 9,316	2,001,245	1,846,885	+ 154,360
"	total	92,232	82,968	+ 9,264	3,677,262	3,528,105	+ 149,157
L.M.S. Northern	pass.	3,850	2,930	+ 920	213,400	207,540	+ 5,860
"	goods	3,580	2,580	+ 1,000	135,660	118,870	+ 16,790
"	total	7,430	5,510	+ 1,920	349,060	326,410	+ 22,650

British and Irish Railway Stocks and Shares

Stocks	Highest 1938	Lowest 1938	Prices	
			Nov. 14, 1939	Rise/ Fall
G.W.R.				
Cons. Ord.	651 ₄	25 ₄	28	—
5% Con. Prefce. . . .	118 ₄	74	82	—
5% Red. Pref. (1950)	111 ₄	90	92 ₁	—
4% Deb.	111	97 ₁	97 ₁	+1
4½% Deb.	112 ₁₆	100 ₁	99 ₁	—
4½% Deb.	118 ₁	104	103 ₁	—
5% Deb.	131 ₁	119	112 ₁	—
2½% Deb.	69 ₄	60	58 ₁	+2
5% Rt. Charge	129	114	106	—
5% Cons. Guar.	128 ₁	103	104	+1
L.M.S.R.				
Ord.	301 ₂	11	101 ₂	—1 ₂
4% Prefce. (1923) . . .	70 ₄	23	34 ₁	—1
4% Prefce.	82 ₄	43 ₄	54 ₁	—1
5% Red. Pref. (1955)	103 ₁	66	75	—1
4% Deb.	105 ₁₆	85	90 ₁	—
5% Red. Deb. (1952)	114 ₄	105	105	—
4% Guar.	102 ₄	77 ₁	81 ₁	+1
L.N.E.R.				
5% Pref. Ord.	89 ₁₆	31 ₂	31 ₂	—
Def. Ord.	47 ₁₆	21 ₁₆	21 ₄	—
4% First Prefce. . . .	68 ₄	21	28 ₁	—1
4% Second Prefce. . .	27 ₄	8	9	—
5% Red. Pref. (1955)	97	40 ₄	44	—1
4% First Guar.	97 ₁	66 ₄	71 ₁	—
4% Second Guar. . . .	91 ₄	52	60 ₁	—1
3% Deb.	79 ₄	60	64 ₁	—
4% Deb.	104 ₁	77	85 ₁	+1
5% Red. Deb. (1947)	110 ₈	97	100 ₁	—
4½% Sinking Fund Red. Deb.	108 ₁₆	101	99	+1
SOUTHERN				
Pref. Ord.	87	477 ₈	57	—2
Def. Ord.	21 ₄	91 ₄	91 ₂	—1 ₂
5% Pref.	115	83	84	—
5% Red. Pref. (1964)	115 ₁	98	96 ₁	—1
5% Guar. Prefce. . . .	128 ₁	106	105	—
5% Red. Guar. Pref. (1957)	116	108 ₁	105	—
4% Deb.	109 ₄	95	97 ₁	+1
5% Deb.	129	117	112 ₁	—
4% Red. Deb. 1962-67	107	101 ₁	101 ₁	—
BELFAST & C.D.				
Ord.	4	31 ₂	4	—
FORTH BRIDGE				
4% Deb.	102	99 ₈	87 ₁	+3
4% Guar.	103 ₄	94 ₁	84 ₁	+1
G. NORTHERN (IRELAND)				
Ord.	51 ₂	21 ₂	6	—
G. SOUTHERN (IRELAND)				
Ord.	251 ₂	81 ₂	101 ₂	—
Prefce.	35	13	22 ₁	+1 ₂
Guar.	70 ₄	30 ₁₅	36	—
Deb.	83	56	54 ₁	+1 ₂
L.P.T.B.				
4½% "A"	119 ₈	107 ₁	105	+1
5% "A"	130	117	110	—
4½% "T.F.A."	108	98	104	+1
5% "B"	122 ₁₆	105	105	+1
"C"	84	68	65 ₈	—
MERSEY				
Ord.	24 ₄	161 ₂	171 ₂	—
4% Perp. Deb.	1027 ₈	94 ₄	90	—
3% Perp. Deb.	77	69	65 ₁	—
3% Perp. Prefce. . . .	66 ₁	57	52 ₁	—

LEGAL AND OFFICIAL NOTICES

NOTICE OF INCREASE IN THROUGH AND PORT TO PORT RATES FOR CONVEYANCE OF MERCHANDISE TRAIN TRAFFIC, PASSENGER TRAIN TRAFFIC AND LIVE-STOCK BETWEEN GREAT BRITAIN AND IRELAND; ALSO BETWEEN GREAT BRITAIN AND THE CHANNEL ISLANDS.

IN pursuance of an Order made by the Minister of Transport on the 10th November, 1939, entitled "The Railways (Increase of Through Rates) Order, 1939," the Railway Companies trading between Great Britain and Ireland and between Great Britain and the Channel Islands hereby give Notice that in consequence of the increased cost of operating sea services, all rates between Great Britain and Ireland, also between Great Britain and the Channel Islands, will be increased as under, on and from 20th November, 1939.

		Additions to existing through rates and port to port rates.
1. <i>Merchandise Traffic</i> —		
Traffic in—		
Classes 1 to 6 of British Railway Classification	5s.	per ton.
Classes 1 and 2 of Irish Railway Classification		
Classes 7 to 10 of British Railway Classification	7s. 6d.	
Classes 3 and 4 of Irish Railway Classification		
Classes 11 to 16 of British Railway Classification	10s.	
Classes 5 and 6 of Irish Railway Classification		
Classes 17 to 21 of British Railway Classification	12s. 6d.	
Classes 7 to 9 of Irish Railway Classification		

2. <i>Live Stock</i> .		
Horses and mules and other beasts of burden	10s.	per head.
Cattle and calves	4s. 6d.	"
Pigs	2s. 6d.	"
Sheep, lambs and other small animals	1s. 6d.	"
Wild animals	10s. 0d.	"
3. <i>Corpses</i>	7s. 6d.	each.
4. <i>Certain Traffic in the Passenger Train Classification not embraced in the foregoing</i>		
Division I (milk)	9d.	per can.
Division II (perishables traffic other than milk)	6d.	per cwt.
Traffics in Divisions I and II charged at Exceptional and Special rates	6d.	"
Groups 1, 2, 3 and 4 (Parcels Scales).		
Up to 28 lb.	2d.	
Over 28 lb. but not exceeding 56 lb.	4d.	
Over 56 lb. but not exceeding 84 lb.	5d.	
Over 84 lb. but not exceeding 112 lb.	6d.	
Over 112 lb.	6d.	per cwt.
Group 6 (Cycles, Perambulators, etc.).		
Articles in sections (a) (b) and (c)	4d.	each.
Articles in sections (d) (e) and (f)	6d.	"
Miscellaneous traffic not otherwise provided for	6d.	per cwt.

Additions to existing through rates and port to port rates

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is noon on Thursday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

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CONTRACTS AND TENDERS

The 7,200 wagons, which, as announced in this column last week, the L.N.E.R. is to build in connection with its modernisation policy, have been allocated to the company's Faverdale works, Darlington.

Linley & Co. Ltd. has received an order from the Bengal-Nagpur Railway for four copper firebox plates, to the inspection of Messrs. Robert White & Partners.

The following orders have been placed to the inspection of Messrs. Rendel, Palmer & Tritton:

Madras Port Trust:
Alldays & Onions Ltd.: One chain-annealing oil-fired furnace.
Bengal & North Western Railway:
John Baker & Bessemer Ltd.: 252 loco carriage and wagon tyres.
Wm. Beardmore & Co. Ltd.: 301 carriage and wagon tyres.
Metropolitan-Cammell Carriage & Wagon Co. Ltd.: 1,000 coupling hooks for carriages and wagons.

The China Purchasing Agency, on behalf of the Chinese Ministry of Communications, has placed the following orders, all to the inspection of Messrs. Fox & Mayo:

General Electric Co. Ltd.: Portable telephone sets and switchboards.
Siemens Brothers & Co. Ltd.: Terminal boxes, etc.
Standard Telephones & Cables Ltd.: Telegraph equipments.
Thos. Bolton & Sons Ltd.: Hard joint copper wire.
Enfield Cable Works Ltd.: Hard joint copper wire.

The orders for \$25,000,000 worth of railway equipment placed by the Canadian Defence Purchasing Board, as recorded in this column on November 3, have been divided as follows:

Canadian Car & Foundry Co.: 1,100 box cars and 500 flat cars for the C.N.R. and 500 box cars and 100 automobile cars for the C.P.R.
Montreal Locomotive Works: 15 steam locomotives for the C.N.R. and 12 for the C.P.R.

Eastern Car Company: 1,075 box cars for the C.N.R.

National Steel Car Corporation: 10 mail and express cars, 200 refrigerator cars, and 500 box cars for the C.P.R.; 590 box cars for the C.N.R.

Canadian Locomotive Company: 10 steam locomotives for the C.N.R. and 12 for the C.P.R.

The Associated Equipment Co. Ltd. has received the following orders:—

Scottish Motor Traction Co. Ltd.: 20 Regal oil-engined single-deckers (bringing the A.E.C. vehicles in the S.M.T. fleet up to over 200).

Rhonda Transport Co. Ltd.: 10 Regent diesel double-deckers.

Caledonian Omnibus Co. Ltd.: One Matador diesel lorry.

Thos. Tilling Limited: Two Matador and one Mammoth Major 8 lorries, all oil engined.

The Egyptian State Railways are enquiring for tenders (E.S.R. 302.G.3/29) by December 30 for two different types

of rail anchors in numbers up to 10,000 and 100,000. Tenders are also invited for copper and brass bars (No. E.S.R. 306.G.8/114), and for 25 tonnes of light lubricating oil and 13 tonnes of fuel oil for internal combustion engines (No. E.S.R. 359.G.3/2-22, by November 30). The Inspecting Engineer's address is 41, Tothill Street, London, S.W.1.

The Eastern Bengal Railway is enquiring for 43 locomotive boilers; tenders to be in at Calcutta by December 19. Consulting Engineers: Messrs. Rendel, Palmer & Tritton, London, S.W.1.

The Jamnagar & Dwarka Railway is enquiring for tenders, by December 1, for a "P" class 4-6-0 tender locomotive. Consulting Engineers: Messrs. Robert White & Partners, London, S.W.1.

RAILWAY AND OTHER REPORTS

Argentine North Eastern Railway Co. Ltd.—Results for the year ended June 30, 1939, show gross receipts of £741,705, an increase of £42,675, or 6.1 per cent. Working expenses, amounting to £511,358, were higher by £24,365, or 5 per cent., and the net receipts of £230,347 showed an improvement of £18,310. The operating ratio improved from 69.67 per cent. to 68.94 per cent. Exchange losses and differences amounted to £63,226, against £59,098, leaving a balance of £167,121, compared with £152,939. The debit balance on the year's working, after allowing for prior charges, is £19,262.

Argentine Great Western Railway Co. Ltd.—The report for the year to June 30, 1939, shows that under the working agreement this company received from the Buenos Ayres & Pacific Railway Company and distributed in

respect of the year: interest on the 1st and 2nd debenture stock paid January 1 and July 1, 1939, £136,000. The company also received from the Pacific Company £272,600 and paid one year's arrears on the Great Western 5 per cent. debenture stock, thus bringing payment of arrears up to April 1, 1935. The Pacific Company was unable to make any payment on account of dividend on the Great Western 6 per cent. guaranteed preference stock. The stockholders' committee, in accordance with the powers conferred upon it by the schemes of arrangement of 1932, 1935, and 1938 has extended the moratorium period in respect of interest on the Great Western 5 per cent. debenture and 6 per cent. guaranteed preference stocks to June 30, 1940. The length of line, including crossing loops and sidings, at June 30, 1939, was 1,448 track-miles.

Railway Share Market

The latest events in international affairs have affected sentiment on the Stock Exchange, and in the absence of further improvement in the volume of business moderately reactionary conditions have prevailed. There was, however, little selling in evidence, and subsequently the somewhat lower prices were inclined to attract buyers. Despite the easier tendency in Government securities, debenture stocks of the home railways continued in request on the wider realisation of the favourable yields obtainable at current prices. In some cases, however, it was found that stock was in very short supply in the market. On the other hand the junior securities of the main line companies reflected the general market trend and were slightly lower on balance for the week due partly to the new wages demand. In some quarters it is being suggested that the decision in respect of compensation for the war-time services of the railways may not be announced before the turn of the year. It is, however, to be hoped that an official statement as to the position may be made during the next few weeks, if it has been found necessary for a further period to elapse before the final decision is possible.

Although the prevailing view is that in all probability the junior stocks are under-

valued, in existing circumstances, there is, of course, nothing of a definite nature on which to base this assumption. Until the Government's plans are available it is, therefore, prudent to class the junior preference and ordinary stocks as carrying a good measure of speculative risk. They may, however, not show very sharp fluctuations, although they must naturally be expected to be influenced by the day-to-day trends of the Stock Exchange.

As compared with a week ago Great Western 4 per cent. debentures have improved further from 96½ to 98, while the 5 per cent. consolidated stock was three points higher at 105. At 82 the 5 per cent. preference was unchanged, while the ordinary stock at 28 was also unchanged on balance, despite moderate fluctuations. L.M.S.R. 4 per cent. debentures remained at 90½, while the 5 per cent. debentures were also the same as a week ago, but the 4 per cent. guaranteed stock, which offers an attractive yield, was slightly lower at 80½. On the other hand L.M.S.R. 1923 preference declined a point to 34½, while the 4 per cent. first preference made the reduced price of 55, and the ordinary stock was quoted at 10½. Among Southern issues the preferred went back three points to 55, and the deferred was around 9½, but the 4 per cent. debentures were higher at

97½, compared with 96, and an improvement from 104½ to 105 was shown by the 5 per cent. guaranteed, which is now at the same price as the equivalent Great Western stock. L.N.E.R. first guaranteed was reduced to 70½, while the second guaranteed was 60½, but the 4 per cent. and 3 per cent. debentures at 85 and 65 respectively were each half a point better as compared with a week ago. The first preference made the lower price of 28½.

Apart from the general trend of markets, Argentine railway securities also reflected the cautious nature of the statements at the annual meetings, which tended to emphasise that, although prospects are more encouraging, the effect of increased costs is already being felt. Consequently the ordinary and preference stocks were inclined to ease, and various debentures were slightly lower. Exceptionally, Cordoba Central "B" debentures were higher at 55, while Central Argentine 5 per cent. debentures improved to 63½. Elsewhere Antofagasta stocks were unresponsive to the news of the proposed debenture repayments, and the preference stock was slightly down at 31½. Nitrate Rails ordinary and Leopoldina debentures made better prices, C.P.R. preference responded to hopes that a small dividend may be paid in the early part of 1940.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1938-39	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to Date			Shares or Stock	Prices						
			Total this year	Inc. or Dec. compared with 1938		Totals		Increase or Decrease		Highest 1938	Lowest 1938	Nov. 14, 1939	Yield % (Note)			
						This Year	Last Year									
South & Central America	Antofagasta (Chili) & Bolivia	834	5.11.39	£ 11,400	—	250	44	£ 590,820	£ 661,050	—	70,230	Ord. Stk.	14	7¼	91½	Nil
	Argentine North Eastern	753	4.11.39	ps. 132,900	—	ps. 27,500	19	ps. 3,152,000	ps. 3,269,100	—	ps. 117,100	"	61½	2	21½	Nil
	Bolivar	174	Oct. 1939	4,500	+	950	43	42,850	37,200	+	5,650	6 p.c. Deb.	8	7	7	Nil
	Brazil		4.11.39	ps1,105,000	—	ps40,000	19	ps. 21,846,000	ps21,296,000	+	ps550,000	Bonds.	10	4	6	85½
	Buenos Ayres & Pacific	2,801	23.9.39	\$114,600	—	\$20,100	13	\$1,520,100	\$1,515,900	+	\$4,200	Ord. Stk.	6½	3¼	3½	Nil
	Buenos Aires Central	190	4.11.39	ps1,986,000	+	ps20,000	19	ps34,921,000	ps36,628,000	—	ps1,707,000	Mt. Deb.	15½	12	12	Nil
	Buenos Ayres Gt. Southern	5,082	4.11.39	ps1,986,000	+	ps20,000	19	ps34,921,000	ps36,628,000	—	ps1,707,000	Ord. Stk.	175½	8½	7½	Nil
	Buenos Ayres Western	1,930	4.11.39	ps. 625,000	—	ps56,000	19	ps12,486,000	ps11,609,000	+	ps 877,000	"	125½	5	6½	Nil
	Central Argentine	3,700	4.11.39	ps1,488,500	—	ps114,500	19	ps34,590,450	ps30,594,400	—	ps3,996,050	"	13¼	5½	7½	Nil
	Do.											Dfd.	6	2½	2½	Nil
	Cent. Uruguay of M. Video	972	4.11.39	17,984	—	2,026	19	305,104	314,559	—	9,455	Ord. Stk.	3	1¼	1½	Nil
	Costa Rica	188	June 1939	25,240	—	6,129	52	270,756	314,399	—	43,643	Stk.	28	22½	22½	87½
	Dorada	70	Oct. 1939	13,000	—	2,800	43	136,700	163,800	—	27,100	1 Mt. Db.	105¼	104	102½	57½
	Entre Rios	810	4.11.39	ps. 200,500	—	ps65,000	19	ps. 4,736,500	ps4,682,700	—	ps. 53,800	Ord. Stk.	7¼	3½	5	Nil
	Great Western of Brazil	1,092	4.11.39	12,100	—	100	44	369,800	314,000	+	55,800	Ord. Sh.	3½	1½	2½	Nil
	International of Cl. Amer.	794	Sept. 1939	\$862,984	—	\$8,355	39	\$4,486,381	\$4,189,953	+	\$296,428	"	—	—	—	—
	Interoceanic of Mexico											1st Pref.	6d.	6d.	1½	Nil
	La Guaira & Caracas	22½	Oct. 1939	5,615	—	615	43	60,725	53,110	+	7,615	Stk.	8	6½	7½	Nil
	Leopoldina	1,918	4.11.39	23,720	+	1,442	44	920,782	934,675	—	13,893	Ord. Stk.	4	1	2	Nil
	Mexican	483	21.8.39	\$286,000	+	\$35,500	8	\$2,003,100	\$1,988,800	+	\$14,300	"	¼	1½	1½	Nil
	Midland of Uruguay	319	Sept. 1939	8,611	—	1,619	13	25,665	25,076	+	589	Ord. Sh.	7½	1½	1½	Nil
Nitrate	386	31.10.39	4,455	—	2,043	43	98,199	122,252	—	20,093	Pr. Li. Stk.	52½	19½	13½	71½	
Paraguay Central	274	4.11.39	\$2,478,000	—	\$425,000	19	\$58,693,000	\$56,163,000	+	\$2,530,000	"	60	55½	40½	141½	
Peruvian Corporation	1,059	Oct. 1939	62,485	—	3,310	18	254,699	278,342	—	23,643	Pref.	53½	15½	11	Nil	
Salvador	100	23.9.39	48,494	—	44,156	13	\$121,775	\$146,315	—	\$24,540	Pr. Li. Db.	23	20	19½	Nil	
San Paulo	153½	29.10.39	34,921	+	5,851	43	1,363,273	1,399,969	—	36,696	Ord. Stk.	64	28	35	51½	
Taltal	160	Sept. 1939	740	—	940	13	4,425	7,900	—	3,475	Ord. Sh.	15½	1	9½	87½	
United of Havana	1,353	4.11.39	14,079	—	1,399	19	320,465	304,153	+	16,312	Ord. Stk.	35½	1½	1	Nil	
Uruguay Northern	73	Sept. 1939	1,022	+	69	13	2,603	2,770	—	167	Deb. Stk.	2	1	2	Nil	
Canada	Canadian National	23,698	7.11.39	943,205	+	140,812	44	33,781,023	30,856,910	+	2,924,113	"	—	—	—	—
	Canadian Northern										4 p.c. Gar.	72	60	69½	53½	
	Grand Trunk											104	90	98½	41½	
Canadian Pacific	17,171	7.11.39	720,600	+	68,000	44	25,143,200	24,108,800	+	1,034,400	Ord. Stk.	87½	41½	7	Nil	
India	Assam Bengal	1,329	30.9.39	48,742	+	610	26	732,490	686,217	+	36,273	Ord. Stk.	81½	70	60½	415½
	Barsi Light	202	30.9.39	11,032	—	1,703	26	59,325	72,975	—	13,650	Ord. Sh.	60½	54½	45	87½
	Bengal & North Western	2,112	20.10.39	66,385	—	4,687	3	126,366	140,769	—	14,403	Ord. Stk.	31½	278	233	74½
	Bengal Doonars & Extension	161	10.10.39	14,219	—	492	27	70,839	76,977	—	6,130	"	89	83	86½	71½
	Bengal-Nagpur	3,267	20.10.39	223,725	+	46,209	28	4,270,313	3,759,715	+	510,598	"	95½	90	84½	42½
	Bombay, Baroda & Cl. India	2,986	31.10.39	256,350	+	15,600	29	4,938,075	4,960,950	—	22,875	"	1127½	95	95½	61½
	Madras & Southern Mahratta	2,967	20.10.39	142,425	—	10,735	28	2,764,621	2,625,694	+	138,927	"	108	97	99½	71½
	Rohilkund & Kumaon	546	20.10.39	12,263	—	1,113	3	23,763	26,245	—	2,482	"	308	285	243	77½
	South Indian	2,531½	20.10.39	104,394	—	14,254	28	2,314,152	2,328,745	—	14,593	"	104	101	87½	51½
	Beira	204	Aug. 1939	91,166	—	48	48	887,267	—	—	—	"	—	—	—	—
Various	Egyptian Delta	623	10.8.39	5,875	+	486	19	67,548	65,905	—	1,643	Pr. Sh.	—	5/6	1½	Nil
	Kenya & Uganda	1,625	May 1939	206,557	—	11,295	21	1,220,870	1,309,332	—	88,462	B. Deb.	49	41	44	715½
	Manila											Inc. Deb.	93½	89	89	41½
	Midland of W. Australia	277	Aug. 1939	11,847	—	2,567	9	23,105	27,657	—	4,552	"	—	—	—	—
	Nigerian	1,900	2.9.39	24,469	—	2,749	23	601,488	671,855	—	70,367	"	—	—	—	—
	Rhodesia	2,442½	Aug. 1939	406,107	—	48	48	4,013,240	—	—	—	"	—	—	—	—
	South Africa	3,284	14.10.39	685,891	+	38,065	29	18,445,905	17,340,268	+	1,105,637	"	—	—	—	—
	Victoria	4,774	July, 1939	684,890	—	31,455	4	684,890	716,345	—	31,455	"	—	—	—	—

NOTE. Yields are based on the approximate current prices and are within a fraction of 1/16 Argentine traffic is now given in pesos. † Receipts are calculated @ 1s. 6d. to the rupee.

\$ ex dividend